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Alberta
TRANSPORTATION

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Alberta

TRANSPORTATION

Office of the Minister

423 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 403/427-2080

The Honourable
Frank Lynch-Staunton
Lieutenant-Governor
Province of Alberta

March 1, 1984

Sir:

I have the honour to submit to you the Annual Report of Alberta Transportation for the fiscal year ending March 31, 1983.

Respectfully submitted,

MARVIN E. MOORE
Minister of Transportation

Office of
the Deputy Minister

2nd Floor, Twin Atria Building, 4999 - 98 Avenue, Edmonton, Alberta, Canada T6B 2X3 403/427-2081

The Honourable
Marvin E. Moore
Minister of Transportation

March 1, 1984

Sir:

I have the honour to present to you the Annual Report for Alberta Transportation for the fiscal year ending March 31, 1983.

During the year we actively proceeded with our plans towards consolidating Alberta Transportation's organizational structure in order to ensure that our service is being provided efficiently and economically.

The department continues to address local, regional, provincial and national concerns in order to provide a safe, reliable and functional transportation system for the use of all Albertans.

Respectfully submitted,

Harvey M. Alton
Deputy Minister

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ADMINISTRATION DIVISION

D.A. McGeachy,
Assistant Deputy Minister

COMPUTER SERVICES BRANCH

D.R. McTavish,
Director

EQUIPMENT, SUPPLY AND SERVICES BRANCH

H. Wilson,
Executive Director

FINANCE AND ADMINISTRATIVE SERVICES BRANCH

D.J. Porter,
Executive Director

PERSONNEL BRANCH

D.R. Learoyd,
Director

Administration Division is comprised of four branches: Computer Services Branch, Equipment Supply and Services Branch, Finance and Administrative Services Branch, and Personnel Branch.

The primary function of these branches is to support the construction and maintenance programs of the Department. Through proper support, these programs can be delivered in an efficient and effective manner, thereby either adding to or prolonging the department's investment in the highway infrastructure in Alberta.

The secondary function of these branches is to maintain a close working relationship with central government agencies such as Treasury, Personnel, Administration Office, Housing, and Public Works, Supply and Services.

Departmental programs were increased substantially over previous years. The impact of this increased activity is reflected in the branch reports that follow.

COMPUTER SERVICES BRANCH

Computer Services Branch develops, maintains and supports computer programs and systems for the department. The branch, which is the primary liaison between the department and the Information Services Division of Alberta Government Services, consists of three sections:

Systems Planning is responsible for the development of short- and long-range data processing plans for the department;

Systems Development is responsible for the construction, implementation and maintenance of computer systems. This section also provides special technical support to the entire department;

Operations provides data entry, data control and remote job entry services to departmental users.

During the reporting period the branch worked on 184 projects which consumed 23 751 man-hours. The average project required 129 man-hours. Approximately 18 000 man-hours were expended on non-project activities including user support, education and teaching, while Operations Section keyed 75 million characters of data during the year.

Some specific projects are mentioned below.

Construction and Financial Reporting System: This reporting system was constructed to provide head office staff with a means of keeping track of construction budgets versus expenditures in any fiscal year.

Regional Terminals: An extensive effort was undertaken to train field staff in the use of the Mohawk remote job entry terminals located in each of the regional and district offices. The equipment was also enhanced to increase the flexibility of each unit.

Fleet Unit Costing System: A considerable amount of maintenance was carried out on this system to improve its general operation and capability.

Human Resource Management Information System (HRMIS): Several software packages for this application from firms in the private sector were evaluated, and the system offered by Information Sciences was chosen. Development of a contract and negotiations with the vendor took place near the end of the fiscal year, with a view to acquiring the package early in fiscal 1983/84.

The system is intended to assist the Personnel Branch in the areas of payroll and benefits, recruitment and selection, and organizational development.

Equipment Inventory System: Further maintenance was carried out on this system to improve its general operation. The system is used by the Equipment, Supply, and Services Branch to aid in the management of the parts and materials acquired under the Transportation Revolving Fund.

Departmental Interactive Graphics: A Request For Proposals was prepared late in the fiscal year for this system, which will find application in the areas of highway and structural design, photogrammetry and mapping.

Departmental Menu System: Initiated during the reporting period, this project is intended to allow users to run production systems by selecting their requirements from menus that will appear on their video terminals. The system will also provide a measure of security for data and systems.

Vacant Position System: This system was developed for the Personnel Branch to allow easier tracking of vacant positions within the department.

Course Management System: This system was developed for the Personnel Branch to allow them to maintain records of staff development.

Air Photo Inventory System: Developed for the Operational Planning Branch, the air photo inventory system is used to manage the large library of aerial photograhs used in location analysis and design of highways.

Pavement Management System: This system was designed and constructed by a consulting firm, and was implemented with the assistance of this branch. It can maintain records on pavement conditions throughout the province so that more efficient highway planning and design can be undertaken.

ICES ROADS: This system is now used for nearly all the roadway design undertaken by the department. During the reporting period the department received several enhancements that were developed as a result of a contract with the vendor (McDonnell Automation) and several highway departments in Canada and the United States. This cooperative approach to systems development allows each participant to receive the benefits of the enhancements at a substantially reduced cost.

EQUIPMENT, SUPPLY AND SERVICES BRANCH

Equipment, Supply and Services Branch administers the department's Transportation Revolving Fund. In this role, the branch acts as a centralized supply and service agency addressing the requirements of the department.

Audited financial statements for the Transportation Revolving Fund for year ended March 31, 1983, are shown on the pages which follow.

The branch's responsibilities are implemented through three operations divisions: Equipment Fleet Management; Repair Shops; and Stores. Reports follow on the activities of each of these.

EQUIPMENT FLEET MANAGEMENT

The Transportation Revolving Fund owns and operates a large fleet of fixed and mobile equipment

used by the department in the construction and maintenance of roads, bridges and airports within the provincial transportation system. Data on this equipment is shown in Schedule A1.

The department's fleet has remained relatively constant in size during the 1982/83 fiscal year, with utilization of light truck units increasing slightly compared with the 1981/82 budgetary year. Heavy equipment, motor graders in particular, showed a decline in utilization. This was due mainly to the mild weather and snowfall of last winter.

The branch, with input from other sections of the department, has continued to provide technically innovative and cost-efficient equipment by the most economical means. New equipment introduced in the 1982/83 fiscal year included a 60-ton hydraulic crane to be used in the construction or maintenance and repair of highway bridges. An additional traffic lane marking truck and a new mechanical snow blower were also added to the fleet.

Several innovative changes to equipment specifications were made during the year, the most notable being the introduction of a heavy-duty diesel engine for snowplowing and sanding trucks.

SHOP OPERATIONS

The branch operates a network of 31 repair, maintenance and service facilities throughout the province. These installations service, repair, overhaul and maintain the equipment fleet in accordance with established maintenance programs. They also provide services to other users on a cost-recovery basis.

The two major facilities in the network are located at Airdrie and Edmonton. Operations at these two facilities include the manufacture of finished units and the overhaul and reconditioning of components for inventories.

The branch's **sign shop** in Edmonton manufactured 49 000 signs during the year. This was a decrease of nine percent on the 54 000 signs manufactured in 1981/82.

At the end of this fiscal year, 232 personnel were assigned to Shop Operations.

Shop Operations is also responsible for the department's Apprentice Training Program. On March 31, 1983, 130 apprentices were being trained under this program. Apprentices in training consisted primarily of heavy-duty mechanics, welders, partspersons and machinists.

STORES OPERATIONS

Through its parts and materials inventory, Stores Operations supports the fleet equipment maintenance and repair program carried out by Shop Operations. In addition, the unit provides customized materials for the department's program branches and for other government users.

Main items of inventory include machine parts and related materials, and specialized road construction and maintenance materials including stockpiles of gravel.

Approximately 25 000 individual items are included in Stores Operations' inventories. This figure represents a reduction of some 6000 items over last year's total of 31 000 items, a reduction achieved through a concentrated effort of inventory evaluation as well as the elimination of slow-moving and dead-stock items.

All inventories have now been converted to computer-controlled systems, the final conversion taking place in December 1982. Benefits emanating from this conversion include improved accounting, standardization of procedures, and more efficient asset management.

Schedule A1

EQUIPMENT FLEET STATISICS

	Unit #	Fuel Consumed Gasoline Decalitres	Fuel Consumed Diesel Decalitres	Distance Kilometres	Time in Use Hours	Time in Use Days
Trucks						
1-ton and under	1768	1020253	30544	42264760		
Over 1-ton	661	40869	532624	13505639		
Total	2429	1061122	563168	55770398		
Graders	277	507	409516		246141	
Cabooses	492					112720
Other	3089	39242	335531			
Total	6287	1100871	1308215	55770398	246141	112720
Previous year's total	6317	1070618	1456779	51093161	177098	113363
Percentage change	-0.5	+2.8	-10.2	+9.2	-11.2	-0.6

ALBERTA LEGISLATURE

OFFICE OF THE AUDITOR GENERAL

AUDITOR'S REPORT

To the Minister of Transportation:

I have examined the balance sheet of the Transportation Revolving Fund as at March 31, 1983 and the statements of operations and deficit and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Fund as at March 31, 1983 and the results of its operations and the changes in its financial position for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

C.A.
Auditor General

Edmonton, Alberta
September 19, 1983

NOTES TO THE FINANCIAL STATEMENTS

MARCH 31, 1983

Note 1
Authority

The Transportation Revolving Fund operates under the authority of the Department of Transportation Act, Chapter D-30, Revised Statutes of Alberta 1980.

Note 2
Significant Accounting Policies

(a) Inventories

Inventories are valued at cost or computed average cost. Gravel inventories are purchased for and maintained by the Department of Transportation. Portions of inventories of lumber and petroleum products are held by third parties.

(b) Land Inventory

Land which is purchased for the Property Services Branch of the Department of Transportation and can be transferred at any time upon request, is valued at cost less recoveries from sales and rentals.

(c) Depreciation

Equipment is depreciated on a straight-line usage basis with the exception of ¾ ton trucks which are depreciated on the basis of kilometers used. The approximate useful life of major equipment categories is as follows:

Light trucks	4 years
Heavy trucks	6 or 7 years
Graders, tractors, loaders, trailers, asphalt plants and cranes	8 or 10 years

(d) Administration Expenses

Repair shops, warehouse facilities, head office accommodations, basic office equipment furnishings and certain salaries and wages are provided by the Province of Alberta at no cost to the fund, and accordingly are not reflected in these financial statements.

Note 3
Inventories

Inventories are summarized as follows:

	1983	1982
Parts and supplies	$ 13,032,645	$ 15,005,633
Gravel	1,336,330	5,129,977
Lumber	1,771,697	1,818,612
Petroleum products	333,782	306,908
Work in progress	399,000	306,322
	$16,873,524	$ 22,567,452

Note 4
Approval of Financial Statements

These financial statements were approved by management on September 19, 1983.

Statement A

TRANSPORTATION REVOLVING FUND
BALANCE SHEET

AS AT MARCH 31, 1983

	1983	1982
ASSETS		
Current:		
Accounts receivable	$ 18,404,625	$ 13,133,253
Inventories (Note 3)	16,873,524	22,567,452
Land inventory	11,040,109	14,569,478
	46,318,258	50,270,183
Fixed:		
Equipment, at cost	79,610,283	64,336,796
Less: Accumulated depreciation	39,322,018	33,230,928
	40,288,265	31,105,868
	$ 86,606,523	$ 81,376,051
LIABILITIES AND SURPLUS		
Current:		
Accounts payable	$ 4,749,558	$ 6,063,323
Provincial Treasurer's advance	84,108,238	78,678,522
Deficit, Statement B	(2,251,273)	(3,365,794)
	$ 86,606,523	$ 81,376,051

The accompanying notes are part of these financial statements

Statement B

TRANSPORTATION REVOLVING FUND
STATEMENT OF OPERATIONS AND DEFICIT

FOR THE YEAR ENDED MARCH 31, 1983

	1983	1982
Equipment operation:		
Rentals	$ 29,150,249	$ 21,836,169
Gain on disposal of equipment, net	268,986	274,254
	29,419,235	22,110,423
Less: Maintenance and operating expenses, Schedule 1	24,719,782	21,592,139
Depreciation	7,502,586	6,357,821
	32,222,368	27,949,960
Loss on equipment operation	2,803,133	5,839,537
Net profit on sales and shop operations, Schedule 2	3,917,644	1,551,347
Net profit (loss) for the year	1,114,021	(4,288,190)
Surplus (deficit) at beginning of year	(3,365,794)	922,396
Deficit at end of year	$ 2,251,273	$ 3,365,794

Statement C

TRANSPORTATION REVOLVING FUND
STATEMENT OF CHANGES IN FINANCIAL POSITION

FOR THE YEAR ENDED MARCH 31, 1983

	1983	1982
Funds were provided from:		
Operations:		
Net profit (loss) for the year	$ 1,114,521	$ (4,288,190)
Items not involving current funds:		
Depreciation	7,922,508	6,357,821
Gain on disposal of equipment, net	(288,888)	(274,254)
	8,348,101	1,795,377
Advances from the Provincial Treasurer	75,055,786	76,005,931
Proceeds from equipment disposals	565,291	583,297
	83,969,178	78,384,605
Funds were applied to:		
Repayment of advances from the Provincial Treasurer	69,628,050	52,611,514
Additions to equipment	16,971,268	12,818,978
	86,597,318	65,430,492
Increase (decrease) in working capital	(2,628,140)	12,954,113
Working capital at beginning of year	44,206,840	31,252,747
Working capital at end of year	$ 41,568,700	$ 44,206,860

Schedule 1

TRANSPORTATION REVOLVING FUND
SCHEDULE OF EQUIPMENT MAINTENANCE AND OPERATING EXPENSES

FOR THE YEAR ENDED MARCH 31, 1983

	1983	1982
Labour	$ 8,010,509	$ 6,175,600
Parts	7,121,535	6,134,344
Diesel fuel	3,911,291	3,311,369
Gasoline	3,104,889	2,704,721
Blades	1,980,014	1,647,622
Tires	1,248,289	1,119,742
Lubrication	698,769	562,131
Miscellaneous	671,699	668,302
	26,746,995	22,323,831
Less: Internal equipment rentals	968,994	731,692
	$ 25,778,001	$ 21,592,139

Schedule 2

TRANSPORTATION REVOLVING FUND
SCHEDULE OF SALES AND SHOP OPERATIONS

FOR THE YEAR ENDED MARCH 31, 1983

	1983	1982
Revenue:		
Material and land sales	$ 43,547,788	$ 29,571,875
Shop labour services	1,947,070	1,597,454
Surcharge on land sales	901,719	251,084
	46,396,577	31,420,413
Expenses:		
Cost of material and land sales	40,434,921	28,027,751
Shop labour	907,581	1,232,060
Administration	736,431	609,255
	42,078,933	29,869,066
Net Profit	$ 3,917,644	$ 1,551,347

FINANCE AND ADMINISTRATIVE SERVICES BRANCH

Finance and Administrative Services Branch prescribes and implements financial reporting and control systems, policies and procedures for the department, thereby ensuring consistency with the Financial Administration Act 1977 and related Treasury Board directives.

The branch also manages departmental accounting and financial planning activities; supervises facility services and accommodation; and provides records management and related administrative services.

Highlights

In the area of **financial systems and methods**, Finance and Administrative Services Branch over the previous twelve months has co-ordinated the development of a number of systems utilizing ADRS11 computer software and provided user training and guidance in its use.

The branch also commenced major financial system development activities for the department, including regional transportation financial reporting and control, and MSA based departmental financial control system.

Accounting Operations underwent further systemization resulting in improved departmental accounts payable processing systems. These decreased the average invoice processing time from 45 days for the year ended March 31, 1982 to 34 days for the year ended March 31, 1983.

The branch implemented new, automated control and edit systems, thereby improving the accounting process related to: a wage pre-edit system; vendor payment history; cash advances; and Irrevocable Letters of Credit.

In the area of **financial planning and control,** this branch co-ordinated the preparation, review and submission of the department's 1983/84 Estimates of Expenditures as well as provided financial planning advice and co-ordination services for existing departmental programs.

The branch also co-ordinated the department's insurance and risk management activities.

Administration Services provided by the branch included leadership and assistance related to the relocation of Alberta Transportation's offices. A records management program was introduced, and its inventory phase completed for the new offices (35,000 cubic feet of records).

A word processing pilot program aimed at improving the economy and effectivenes of office support staff was started. This is considered the first phase of future office automation.

BUDGETARY EXPENDITURE CLASSIFIED BY OBJECT

(General Revenue Fund)

	In Thousands $ for the Year Ended	
	March 31, 1983	March 31, 1982
MANPOWER:		
Salaries - Permanent Positions	$ 32,412	$ 26,897
Salaries - Non-Permanent Positions	3,552	2,616
Wages	67,516	57,996
Payments to Contract Employees	36	28
Employer Contributions	6,981	6,040
Allowances and Benefits	235	356
Total Manpower	$ 110,732	$ 93,933
SUPPLIES AND SERVICES:		
Travel Expenses	7,172	6,701
Advertising	636	431
Insurance	217	211
Freight and Postage	695	369
Contracts for Construction	235,448	196,274
Rentals	148,710	120,333
Telephone and Communications	2,786	1,948
Repairs and Maintenance	1,657	1,325
Contract Services	12,330	8,748
Data Processing Services	3,438	1,922
Hospitality	24	40
Other Purchased Services	8,957	5,498
Material and Supplies	150,579	129,216
Total Supplies and Services	$ 572,347	$ 473,016
GRANTS:		
Grants to Individuals	1	5
Grants to Business	—	1
Grants to Non-Profit Organizations	340	265
Grants to Own Funds and Agencies	10,062	10,158
Grants to Other Government Levels	253,145	197,770
Total Grants	$ 263,548	$ 208,199
PURCHASE OF FIXED ASSETS:		
Purchase of Real Estate	18,757	11,136
Purchase of Machinery-Equipment	1,442	907
Purchase of Data Processing Equipment	749	15
Purchase of Audio Visual Equipment	74	30
Purchase of Reproduction Equipment	35	21
Purchase of Office Equipment	182	237
Purchase of Furniture	41	6
Purchase of Vehicles	7	4
Purchase of Other Assets	12	52
Total Purchase of Fixed Assets	$ 21,299	$ 12,408
OTHER:		
Payments to Members of the Legislative Assembly and Executive Council	38	34
Interest and Bank Charges	—	—
Total Other	38	34
TOTAL DEPARTMENT	$ 867,964	$ 787,590

BUDGET ESTIMATES, SPECIAL WARRANTS, TRANSFERS AND EXPENDITURES CLASSIFIED BY VOTE

(General Revenue Fund)

		In Thousands $				
		1982-83 Budget Estimates	1982-83 Special Warrants & Transfers	1982-83 Total Authorized	Expenditures For the Year Ended 31-Mar-83	31-Mar-82
Vote 1	DEPARTMENTAL SUPPORT SERVICES					
	Executive Services	$ 1,486	$ 196	$ 1,682	$ 1,419	$ 1,405
	Administrative Services	10,579	264	10,843	10,810	7,107
		12,065	460	12,525	12,229	8,512
Vote 2	CONST.& MAINTENANCE OF HIGHWAYS					
	Programme Support	31,974	1,664	33,638	33,613	24,691
	Improvement of Primary Highway Systems	251,628	35,039	286,667	286,666	222,375
	Improvement of Rural-Local Highways	159,493	9,861	169,354	169,350	151,256
	Financial Assistance for Rural-Local Highways	44,926	—	44,926	44,919	44,006
	Maintenance of Primary Highway Systems	62,126	660	62,786	62,780	57,316
	Maintenance of Rural-Local Highways	16,617	10,513	27,130	27,173	17,732
	Apprenticeship Training	2,754	(206)	2,548	2,547	2,014
	Rural Resource Roads	41,123	(4,062)	37,061	37,061	33,467
	Pavement Rehabilitation	50,029	(4,279)	45,750	45,732	36,340
		660,670	49,190	709,860	709,187	589,197
Vote 3	CONST. & OPERATION OF RAIL SYSTEM	11,500	—	11,500	10,092	10,158
Vote 4	CONST. & MAINTENANCE OF AIRPORT FACILITIES					
	Programme Support	797	19	816	815	729
	Const. of Airports & Airport Maintenance	10,877	873	11,750	11,823	9,667
	Airport Maintenance	1,820	258	2,078	2,069	1,932
		13,494	1,150	14,644	14,707	12,328
Vote 5	SPECIALIZED TRANSPORTATION SERVS.					
	Transportation Planning & Research	2,973	12	2,985	2,979	2,513
	Highway System User Services	9,232	(12)	9,220	9,043	7,734
		12,205		12,205	11,[illegible]	10,247
Vote 6	URBAN TRANSP. FINANCIAL ASSISTANCE					
	Programme Support	761	—	761	694	583
	Financial Asst. - Capital	190,015	—	190,015	189,979	137,160
	Financial Asst. - Operating	21,165	—	21,165	19,449	17,765
		211,941	—	211,941	210,122	155,508
Vote 7	SURVEYS & MAPPING	—	—	—	—	1,640[b]
	TOTAL DEPARTMENT	$ 921,875	$ 50,800[a]	$ 972,675	[illegible]	$ 787,590

(a) Includes $48,000 charged against the original estimates for liabilities of the prior fiscal year, which is the extent they exceeded the available authority.

(b) Survey and Mapping functions were transferred to Energy and Natural Resources.

PERSONNEL BRANCH

The department experienced a marked change in personnel recruitment and selection due to the abrupt downturn in the Canadian economy. The availability of technical and professional personnel improved radically in a comparatively short space of time.

As a result, the department's vacancy rate was greatly reduced. Turnover also dropped sharply over the course of the year, from approximately 12 percent to less than two percent.

The department also experienced increased activity in the area of employee relations, which appears at least partially due to reduced mobility of the work force.

During the period under review, 27 management and 227 non-management positions were staffed. Personnel Branch participated in 745 non-management, decentralized classification actions and 245 centralized actions (where authority rested with the Personnel Administration Office). In addition, 61 management classifications were submitted to the Personnel Administration Office.

Delegation of classification authority by the Personnel Administration Office resulted in increased administrative flexibility, but also substantially increased the workload in this area.

During the period under review, the department had a maximum of 3017 permanent employees on strength. In addition, approximately 2800 wage and non-permanent employees were employed during the construction season.

During 1982/83, Personnel Branch provided an extensive training program for departmental staff through its Organizational Development Section. Some 1604 staff members undertook training on departmental courses; 418 employees participated on courses co-ordinated by Personnel Administration Office; and an additional 335 employees attended privately co-ordinated courses.

Personnel Branch also provided input into negotiations for the Alberta Government's Master and Divisional Agreements.

A project to identify and implement a Human Resource Management Information System (HRMIS) has progressed satisfactorily during the year. Personnel Branch identified a suitable software package and contracted to purchase it. Implementation is scheduled for the coming fiscal year.

During the year, the branch underwent an internal reorganization that has resulted in an improved level of service to management and employees.

ENGINEERING DIVISION

M.A. Kehr,
Assistant Deputy Minister

G.A. Berdahl,
Executive Director

BRIDGE ENGINEERING BRANCH

F.C. Harvey,
Executive Director

CONTRACTS ENGINEERING BRANCH

C.E. Shaul,
Director

MATERIALS ENGINEERING BRANCH

L.W. Nichols,
Director

DESIGN ENGINEERING BRANCH

P.M. Evjen,
Director

RESEARCH AND DEVELOPMENT BRANCH

M.J. Dolinsky,
Executive Director

PROPERTY SERVICES BRANCH

D.C. Holmberg,
Director

Engineering Division provides engineering standards, design, contract administration and technical support for the department's construction programs, which include highways, secondary roads, bridges, airports and air terminal buildings. With the transfer of Property Services Branch, formerly under Regional Transportation, the division

is also responsible for standards of right-of-way and other land acquisitions, legal survey and conveyancing. Applied research and development efforts taking place throughout the department are also co-ordinated within this division.

The work of Engineering Division is accomplished within six branches; namely, Bridge Engineering Branch; Contracts Engineering Branch; Design Engineering Branch; Materials Engineering Branch; Property Services Branch; and Research and Development Branch.

On January 1, 1983, Transportation Safety Branch was transferred to report directly to the Deputy Minister of the department.

Significant growth in the department's construction program in the years immediately preceding this reporting period resulted in a high level of activity continuing through 1982/83. This has largely depleted the inventory of completed engineering surveys and prepared design work for future projects. To avoid a large staff increase, private consultants were used successfully for preconstruction engineering work.

During the reporting period, the division placed continued emphasis in the training of technical staff supporting regional project management.

Increased competitiveness within the roadbuilding industry was experienced throughout the reporting period, as evidenced by keen bidding on departmental contracts. General economic conditions plus the competitive market resulted in an increased number of construction contract and creditor claims being dealt with by the division.

Contract defaults were, however, very few.

A system allowing provision of optional Irrevocable Letters of Credit to replace the department's normal holdback on contract payments was introduced. This proved to be workable as well as popular with the contracting industry in reducing the contractors' costs of project financing.

An expansion of terms of several base-surfacing contracts to allow contractors their choice of gravel supplies showed promising results. Decreased project costs plus optimum utilization of provincial aggregate resources were two bonuses. In addition, this approach provided increased business for the province's commercial gravel industry.

During the reporting period, the division continued to provide road and bridge engineering support to projects managed by other departments and supported by the Alberta Heritage Fund. These included the Kananaskis Country Regional Roads Program and the Irrigation Headworks and Main Irrigation Systems Improvement Bridge Replacement Program.

Additionally, engineering and architectural arrangements were provided for those airport terminals constructed under the Alberta Heritage Savings Trust Fund Air Terminal Buildings Program as a direct department program.

BRIDGE ENGINEERING BRANCH

Bridge Engineering Branch provides bridge design and structural engineering for departmental programs. Its engineering services consist of preliminary engineering, detailed design, materials acquisition, and construction liaison with Regional bridge engineering and construction staff, as required.

On January 1, 1983, Bridge Services Section was transferred back to the Bridge Engineering Branch from the Operations Branch of the Regional Transportation Division.

Services were supplied under four major expenditure areas: Primary Highways Bridges; Construction of Bridges for Local and Secondary Roads; Primary Highways Bridge Maintenance; and Secondary and Local Roads Bridge Maintenance.

Under the **Primary Highways Bridges** expenditure area, bridge structures were designed and constructed to accommodate expansion and upgrading of the province's primary highway system.

These structures varied from 1500mm diameter culverts to crossings of major rivers, such as over the Red Deer River at East Coulee. Highway grade separations accounted for a major part of the costs incurred in this expenditure area.

The expenditure area **Construction of Bridges on Local and Secondary Roads** provided funding for the design, construction and major reconstruction of bridges on local and secondary roads. Again, these structures varied from culverts to major bridges.

Funding was provided for bridge maintenance activities under two separate expenditure areas for **Primary Highways Bridge Maintenance** and **Secondary and Local Road Bridge Maintenance**. Bridges were inspected, maintenance works planned and appropriate works performed. The decks of a number of bridges were restored under a high-density concrete overlay program.

In addition to the major work performed under these four expenditure areas, which are the direct responsibility of the Bridge and Structural Engineering Branch, engineering services were

provided for programs administered by other branches and departments. For example, investigation into the effects of increasing truck weights was continued to provide input for an assessment of the overall effect on the highway system of higher permitted loadings.

Engineering was provided to the Environment Deparment for the design and construction of three structures on an upgraded section of the St. Mary's River Irrigation System.

Bridge Branch staff also provided engineering input into the administration of the department's Urban Transportation Financial Administration Program Package programs.

MAJOR BRIDGE CONSTRUCTION PROJECTS

Overpass at Dunmore: Twinning of the Trans-Canada Highway east of Medicine Hat included construction of a new overpass to carry eastbound traffic over the CPR and reconstruction of the existing overpass for westbound traffic.

Highway 22X, Highway 2 and CPR Overpass, South of Midnapore: In conjunction with construction of a major interchange just south of Calgary, an overpass to separate Highway 2 and 22X, plus another structure carrying Highway 22X over the CPR, were started.

Upon completion of the project the traffic signal lights on the highway and the existing level crossing on the railway will be removed, contributing to the safety and convenience of the travelling public.

Highway 2 and 32 Street Interchange, Red Deer: In conjunction with providing a new major access to Red Deer from Highway 2, construction was begun on an overpass as part of a grade-separated interchange.

Crowsnest River at Blairmore: Three new bridges were required in conjunction with reconstruction of Highway 3 on a new alignment through Blairmore; one for the highway and one each for an east and central access from the highway.

Red Deer River at East Coulee: The combined railway-highway bridge carrying the CPR and Highway 10 consisted of timber spans which were narrow and deteriorating structurally. Construction to modern standards of a new bridge for highway traffic commenced on an improved alignment.

Sturgeon River at Magnolia: The twinning of Highway 16 west of Edmonton called for the construction of a new bridge for westbound traffic across the Sturgeon River. The existing bridge will remain in service to carry eastbound traffic.

CPR Overpass at Alsask: Reconstruction of Highway 21 south of Fort Saskatchewan to a 4-lane divided standard included construction of twin overpass structures over the CPR tracks. The existing level crossing will be removed upon completion of this railway separation.

Monarch Grade Separation: Reconstruction of Highway 23 to improved standards included an overpass structure over the CPR combined with a separated interchange with Highway 3. The existing level crossing will remain in service as a convenience to local traffic.

Procter & Gamble Haul Road Overpass on Highway 40: Construction of the highway from Grande Prairie to Grande Cache included a new overpass to carry highway traffic over the Procter & Gamble haul road used by large logging trucks.

Wapiti River Bank Protection on Highway 40: In conjunction with construction of the new highway south of Grande Prairie, extensive river training works were completed to protect the highway from erosion by the Wapiti River.

CPR Overpass at Kipp: The relocation of the CPR yards from Lethbridge to Kipp required the construction of an overpass to carry a local road over the eastern end of the new yard.

Pouce Coupe River, North of Bonanza: The first bridge across the Pouce Coupe River in Alberta was erected to provide access for a pocket of residents to schools and trading areas. Previously, the only public access was through British Columbia. Use was made of a steel truss span salvaged from the North Saskatchewan River crossing at Duvernay.

OTHER BRIDGE CONSTRUCTION PROJECTS:

On Primary Highways

River Bridges

	FILE	HWY. NO.	PROJECT AND BRIDGE TYPE
*	75016	2	Spirit River (widening)
	395	3	Crowsnest River - Strengthening
	79438	3	Crowsnest River - Pedestrian Bridge
	7145	22	Raven River
**	13073	22	Lobstick River (widening)
	78518	22X	Bearberry Creek
**	79761	24	B.R.I.D. Canal - Steel girders
	75980	25	B.R.I.D. Canal
*	74035	27	Little Red Deer River
*	73136	47	McLeod River - Steel girders
*	73877	49	Burnt River - Rebuilt deck
*	78031	63	Athabasca River - Steel girders
*	71429	66	Elbow River
**	78192	66	Canyon Creek - Culvert (Kananaskis Country)
*	78194	67	Bear River
**	71316	92	Beaver River (widening) - Steel girders
**	77324	40	Big Mountain Creek (Branch) - Culvert
	79472	40	Kakwa River - Steel girders

Grade Separations

*	8110	2	CNR Over Peace River (extension) -Steel girders
*	75944	2	CNR Over Hwy. 2, Peace River -C.I.P. concrete
*	76060	2	CNR Spurline, Peace River
*	76061	2	CNR Mainline, Peace River - Steel girders
*	75957	16	Seba Grade Separation
	78728	16X	CNR Yellowhead Trail - Steel girders
*	78151	63	Hospital Street, Fort McMurray
*	77548	SR 901	CPR Overpass, Indus

On Secondary and Local Roads

River Bridges

	FILE	HWY. NO.	PROJECT AND BRIDGE TYPE
*	8297	SR 500	Milk River - Salvage truss
**	78201	SR 546	Gorge Creek - Culvert (Kananaskis Country)
*	7553	SR 748	Edson River (widening)
*	8984	SR 750	Salt Creek
	74231	SR 759	North Saskatchewan River, Berrymoor - Steel girders
*	8707	SR 861	Battle River - Steel girders
	211	local	Lee Creek
**	418	local	Crowfoot Creek
**	945	local	Sturgeon River
*	2155	local	Tawatinaw River
**	2409	local	Rosebud River - Salvage truss
	6738	local	Paddle River - Salvage steel girders
*	7064	local	Beaverlodge River
**	7922	local	Willow River
*	70377	local	Kneehill Creek - Salvage truss
**	72607	local	Strawberry Creek - Salvage truss
*	73069	local	Crowsnest River
**	74138	local	Williams Creek
*	75194	local	Simonette River - Salvage truss
*	76091	local	Grease Creek
	76950	local	L.N.I.D. Canal (Site 46)
	77000	local	Pembina River - Steel truss
*	77823	local	Economy Creek - Culvert
*	78187	local	Carbondale River
*	78189	local	Lynx Creek
	78230	local	Brewster Creek - Culvert
*	78709		Alpine Village Access, Kananaskis River (Kananaskis Country)
**	79553	local	Rat Creek

Grade Separations

*	78569	local	CPR Underpass - C.I.P. Concrete (railway)

Note: Unless otherwise indicated, bridges are Prestressed Concrete Girder type construction.

* - Completed in 1982/83 but were started in a prior year
** - Commenced in 1982/83 but carried over into following year

CONSTRUCTION AND RECONSTRUCTION OF STANDARD-TYPE BRIDGES

Bridge Type	Primary Hwys.	District Roads	Total
Standard	10	103	113
Salvage Steel	0	0	0
Culverts	94	233	327
	104	336	440

BRIDGE REPAIRS

Bridge Type	Primary Hwys.	District Roads	Total
Major	163	134	297
Standard	58	199	257
Culverts	22	6	28
	243	339	582

CONTRACTS ENGINEERING BRANCH

Contracts Engineering Branch is responsible for the preparation, tendering, and administration of contracts for the construction of primary highways, secondary roads, roads to provincial parks, approach roads, and airports.

The branch is also responsible for the assessment of contractors' claims and for recommendations on the resolution of claims; for development and construction in the Highway Illumination Program; and for the design of traffic signing and control systems.

Development of the schedule of rental rates for construction equipment is also handled by this branch, as is the co-ordination of environmental management activities and the administration of construction materials supply and procurement.

The branch consists of four sections: Contracts Administration, Construction Claims and Standards, Environmental Management and Materials Purchasing and Administration.

Following are the highlights of the work accomplished by the branch during this reporting

period. Section highlights are followed by a summary of materials used and a year-end statement of the inventory of the province's highway and road network.

CONTRACTS ADMINISTRATION SECTION

Contracts Administration Section prepared and advertised 208 construction contracts during 1982/83. These included 136 contracts for grading, base and or paving construction; 41 for gravel crushing; and 31 for traffic signals, lighting, and buildings. The total value of these contracts, excluding asphalt material and engineering, was approximately $188 million.

Contract administration procedures included checking tenders, processing contract extensions and subcontract approvals, and applications to Treasury to increase contract commitments. Orders for extra work were monitored to ensure compliance with the contracts.

Final details and payment estimates prepared by district staff were audited to ensure that contract payments were according to the contract and department policy. Contractual final clearances and bonds were obtained and releases of holdback and Letters of Credit authorized. Third party claims under the Public Works Act were handled.

Construction and mileage records were maintained, cost indexes calculated, and reports prepared on construction and other details of the highway system.

CONSTRUCTION CLAIMS AND STANDARDS SECTION

Construction Claims and Standards Section in conjunction with other branches and regional staff, developed 28 agreements with consulting engineers, architects and technicians to provide engineering studies, surveys, designs, specifications, drafting services and contract supervision for various transportation projects undertaken throughout the province.

Seven agreements were concluded with various cities, towns, villages and corporations for the construction of primary highways.

The department's annual schedule of rental rates for construction equipment was updated to include newer equipment and to make minor revisions. Basic rates remained unchanged.

The 25th annual in-service Survey School was conducted during the month of March 1983. Forty participants from the various regional districts were selected from staff who attended and successfully completed the regional survey seminars.

Thirty-six of the candidates were successful in attaining the necessary results to qualify for complete certification. The class average of 81 percent was identical to the previous year's average.

The Primary Highway Illumination Program was highlighted by the installation of lighting systems on the Trans-Canada Highway east of Medicine Hat and at Brooks, and on Highway 2 at DeWinton.

The Brooks project was particularly noteworthy as new design standards were used which provide the necessary illumination for safety and vehicular guidance, with a capital cost saving of about 65 percent over a system designed in accordance with previous standards. Operating costs will also be reduced by about 75 percent.

Other installations included the illumination of eight at-grade intersections, 12 sections of highway through Towns and Villages, and a section of highway through an Indian Reserve.

The incorporation of poles 15 metres high along Highway 16 through Hinton will allow for future expansion of the highway system to four lanes, when warranted, without the need to relocate the new fixtures. Added benefits include fewer poles, greater setbacks from the road surface, and improved safety.

A program was initiated to upgrade and modernize some of the old lighting systems existing within the province. The first major project of this nature was completed on the Trans-Canada Highway between Canmore and the Banff Park gates. This involved the installation of breakaway bases to existing light poles to reduce the severity of vehicle-pole collisions, and the replacement of mercury vapour fixtures with high pressure sodium fixtures to improve uniformity, reduce energy consumption, and reduce operating costs.

The section is also responsible for the analysis of contractor claims against the department and for the recommendation of terms of settlement. These claims can usually be settled without litigation, through discussions and negotiations with contractors and our field personnel.

ENVIRONMENTAL MANAGEMENT SECTION

Liaison with other Alberta Government departments continued during the past year with several major concerns being attended to and resolved satisfactorily.

A fish habitat enhancement project was concluded with Alberta Fish and Wildlife Division for the Crowsnest River at Blairmore.

The Archaeological Survey of Alberta was very busy with Alberta Transportation's expanded program, with more permits being issued than in previous years. Only minor problems were encountered during the period.

Design of grading projects was critically examined to determine whether environmental problems might result from the work. Concerns of the other Alberta agencies which were expressed during location study referrals were checked and where necessary, remedial measures were included in the design and contract documents.

Environmental mitigation was addressed in all grading contracts which were carried out in Kananaskis Country in co-operation with environmental consultants.

MATERIAL PURCHASING AND ADMINISTRATION SECTION

A total of 787 purchase orders for highway construction materials were put in place to the approximate value of $120 million.

Liaison with the Purchasing Branch, highway

contractors, district transportation engineers, project managers and suppliers continued on a daily basis resulting in little or no delay or project shutdown.

An additional $2 million worth of drainage and fencing material was detailed to highway construction projects from Alberta Transportation's central service facilities at Edmonton and Airdrie.

Accounts payable functions were carried out for eight highway construction camps as well as Contracts, Materials and Design Engineering branches in the total amount of $25 million.

Bonding, insurance policies and final signatures were obtained on 208 highway construction contracts.

SUMMARY OF MATERIALS

Between April 1, 1982 and March 31, 1983, the following materials were used in contract construction work on provincial primary highways, secondary roads, airports, approach roads, and provincial park roads:

First course gravel surfacing	112 669	m^3
Subgrade backfill material	385 617	m^3
Stabilized base course gravel	4 915 960	t
Cement stabilized base course (sand)	780 721	t
Asphalt stabilized base course (on cement stabilized)	37 669	t
Asphalt base-pavement gravel	749 507	t
Asphalt surfacing gravel	3 761 782	m^3
Granular supply for culverts	2 927	m^3
Gravel to dead hauls	55 792	t
Total asphalt used	249 149	t
Total cement used	42 640	t

These volumes of gravel and sand were removed from pits:

Gravel to road	4 723 572	m^3
Gravel to stockpile	3 142 954	m^3
Sand to road	143 770	m^3

LENGTH OF ROADS

At the end of the reporting period, the lengths in kilometres of existing provincial primary highways, approach roads, and provincial park roads were:

Primary Highways	
Asphalt surface, 2-lane	10,165
Asphalt surface, 4-lane undivided	38
Asphalt surface, 4-lane divided	561
Asphalt surface, 6-lane divided	40
Gravel surface, 2-lane	1,367
Dust control, 2-lane	1,103
	13,174
Approach Roads	
Asphalt surface, 2-lane	267
Gravel surface, 2-lane	25
Dust control, 2-lane	44
	336
Park Roads	
Asphalt surface, 2-lane	253
Gravel surface, 2-lane	13
Dust control, 2-lane	37
	303
900 Series Secondary Roads (Preceding primary declaration)	
Asphalt surface, 2-lane	6
Gravel surface, 2-lane	128
Dust control, 2-lane	19
	153

During the reporting period, 112km of secondary and other roads were designated as primary highways. The primary highway system, however, was reduced 13km due to the expansion of city boundaries.

MATERIALS ENGINEERING BRANCH

Materials Engineering Branch is responsible for:

- geotechnical engineering services and standards in support of all departmental programs;
- testing and quality control standards and procedures for roadway and airport construction;
- pavement inventory, performance monitoring, design standards and services for surfacing programs;
- surfacing program recommendations and structural design;
- departmental laboratory testing and mix design services;
- aggregate supply and management;
- training of materials inspection personnel; and
- specialized engineering services in materials-related matters.

In dealing with the ever-growing demands imposed by the construction programs of the department, plus the depletion fo easily available quality materials, emphasis was placed on a re-examination of past policies and practices with a view to increasing efficiency and maintaining a high level of service.

In general, Materials Engineering Branch was successful in meeting these objectives over the course of the fiscal year 1982/83.

AGGREGATE SERVICES SECTION

Aggregate Services Section is responsible for managing the aggregate supplies needed for the department's construction and maintenance programs. This includes the location, testing, acquisition, and allocation of aggregate; the provision of aggregate-related specifications; and recommendations and standards on aggregate source reclamation.

During the year, 11 aggregate prospecting crews and one consultant located approximately 27.3 million cubic metres of gravel and 2.8 million cubic metres of sand.

Computerization of all basic information contained in the aggregates information system hard copy files was completed during the reporting period. Also, preliminary work took place on microfilming valuable gravel files for future security.

GEOTECHNICAL SERVICES SECTION

Geotechnical Services Section is responsible for providing geotechnical investigation analysis and design services and standards for the planning, design, construction and maintenance of roadways, airfields and bridges.

During the 1982/83 fiscal year, five crews investigated 42 bridge/culvert sites, requiring 2199 metres of drilling. 7250 metres of drilling was performed for roadway and airport preliminary surveys. Investigations of subsurface drainage factors required 4139 metres of horizontal drilling.

Research into problems concerning foundations, slope stability, subsurface drainage, soil stabilization, swelling, frost heaving, and erosion continued. Several consultants were retained to aid in preliminary investigations and testing.

Two computer systems were installed, tested and made operational during this reporting period.

SURFACING SECTION

Surfacing Section is responsible for establishing design standards and for providing designs for the department's primary highways, secondary roads and airfield paving programs. Through pavement condition monitoring and inventory, recommendations are made for the programming of pavement rehabilitation and seal-coat projects.

Other section responsibilities include the preparation of specifications for surfacing materials and construction; the initiation of orders for asphalt, cement and other stabilizing agents; and the provision of technical and professional assistance and advice with respect to surfacing matters.

The pavement evaluation program unit continued to provide strength, smoothness and condition information for roadway and airfield programming and design purposes.

During the year seven Benkelman Beam crews conducted approximately 94 958 tests on 5522 km of roadway and runway. One Dynaflect crew performed 10 519 tests on 630km of roadway and runway. Two roadmeter crews measured smoothness on 14 760 lane-kilometres of roadway and runway, and rated the condition of 8174 km of roadway.

Approximately 850 m of coring, drilling and sampling were taken on 38 projects. The number of frost probes, utilized for road ban protection of the highway system, was increased to 52 locations.

Correlation studies and evaluation of the effectiveness of a skid resistance measuring device (Mu-Meter) resulted in 2856 random tests covering 10 072 lane-kilometers.

Further development of the computerized pavement management system continued for use in the pavement rehabilitation programming. Development work was organized in co-operation with Alberta Research Council and the PMS private consulting service.

Investigations continued into the use of alternative materials to improve the performance and reduce the cost of pavements. This included recycling of asphalt concrete pavements, the use of sulphur-extended asphalts, rubber-asphalt as well as studies into the use of aggregate fillers such as blend sands, lime and fly ash.

Increased use and investigations into emulsified asphalts also occurred during the reporting period.

The design unit developed roadway designs for 56 combined base course and surfacing; 56 base course; 60 final surfacing; 36 gravelling, 47 crushing and 34 crushing for seal coat projects. This unit also programmed and designed 41 seal coat projects, extending over approximately 930km of highway.

TESTING SERVICES SECTION

Testing Services Section, through the Transportation Laboratory, is responsible for providing services and standards in materials; quality control testing; mix design; materials inspector training and certification; test equipment supply; and evaluation of new materials and processes.

The Transportation Laboratory performed over 153 000 tests on approximately 22 400 samples of soil, aggregate, asphalt, cement, paint and other construction and maintenance materials. Eighty mix designs were performed on asphalt concrete and soil cement materials.

Seventeen materials training courses, involving 104 course-days were to 287 technologists and project managers, involving 1861 man-days of projects were supplied with 451 kits of testing equipment.

The field services unit visited 108 construction projects to monitor and assist with plant calibrations, testing procedures, quality control and testing problems. Investigation continued into such materials as sulphur-extended asphalt, rubber-asphalt, fly ash, lime and enzyme soil stabilizers.

DESIGN ENGINEERING BRANCH

Responsibilities of the Design Engineering Branch include:

- development and monitoring of geometric standards for all primary highway, secondary road and provincial airport construction;
- provision of detailed geometric design and drafting services in support of all departmental programs;
- preparation of information for preliminary surveys and right-of-way requests for all highway construction projects;
- grading program recommendations;
- provision of computerized earthwork design quantities and preparation of contract design packages for all primary highway, secondary road and provincial airport construction;
- co-ordination of utility relocations;
- development of detailed project construction schedules for contract provision;
- provision of computerized final earthwork quantity calculation services in support of all departmental programs; and
- training of design, drafting and field personnel in computerized applications.

Highlights of the work accomplished during the reporting period follow.

PRE-CONTRACT SCHEDULING AND UTILITIES CO-ORDINATION SECTION

Pre-Contract Scheduling and Utilities Co-ordination Section arranges and co-ordinates clearances over utilities rights of way, and resolves other conflicts to facilitate construction of roadways. These activities are also undertaken to a partial degree for the construction of airfields and bridges.

During the reporting period, protection or relocation was arranged and co-ordinated for 473 pipelines, 380 km of power lines, and 516 km of telephone cables.

This section also develops detailed project construction schedules for contract provisions to ensure orderly construction progress, and co-ordinates the planning, design, construction and maintenance of the Vehicle Inspection Stations Program.

AIRPORT ENGINEERING SECTION

Airport Engineering Section is responsible for conceptual planning, site evaluation, and detailed engineering design for provincial, community and industrial airports designated within the provincial airport development program. Also, the section provides project management for the provincial airport terminal building program.

To accomplish these tasks, the section develops and maintains geometric airport standards, initiates and monitors preliminary surveys, issues requests for construction materials, and designs and drafts airport plans for tendering.

During the reporting period, the section developed 17 conceptual plans, each with due consideration for airport zoning, wind analysis, site suitability and construction cost. Detailed engineering design was completed on six new airports, with design enhancements completed on seven existing airports.

Runway lighting and marking designs were completed on 14 facilities; three visual approach guidance systems were also designed. In all cases, the section provided contract tender quantities and any special provisions in close liaison with other branches.

In the airport terminal building program, work was completed in the Fort Vermilion and Manning terminal buildings. Minor clean-up of deficiencies was made on the Lloydminster terminal building.

The design for a major airport terminal building at Peace River was completed with an architectural consultant, Transport Canada, and commercial air carriers. Construction start up took place during this reporting period. Preliminary work on the Wetaskiwin air terminal building was commenced.

The section provides ongoing assistance to Regional Transportation personnel in the interpretation of drawings and specifications, in checking final details, and in providing assistance when design changes are warranted.

DESIGN SUPPORT SECTION

Design Support Section:

- provides drafting services for all highway construction programs;
- establishes and maintains departmental drafting standards;
- determines branch five-year computer system development and acquisition requirements, and prepares service request specifictions to achieve these needs;
- coordinates use of effective computerized methods in Design Engineering Branch operations;
- manages use of computerized methods for processing final earthwork quantity calculations and plots for 15 district Regional Transportation offices; and
- trains head office and district engineering staff in use of engineering computer systems.

Drafting services were provided for other departmental branches. More than 2500 engineering plans for highway construction programs were completed during the reporting period. Overall, 28 percent more engineering plans were prepared this year than during the previous fiscal period.

In order to meet construction program schedules approximately 14 200 man hours of additional drafting services were provided through use of casual employees.

Second-phase microfilm operations were undertaken for the balance of current engineering plans and documents maintained and stored by this section. This second phase work involved generation of an additional 28 000 microfilm images that were added to active files.

Approximately 15 000 engineering field books and all as-built final roadway cross-section plots were transferred from Design Engineering Branch storage vaults to appropriate Regional Transportation district offices.

Further disposition undertaken with approval of the Provincial Archives Public Records committee included destroying approximately 10000 outdated and obsolete field records books. As well, a large number of engineering plans and documents were submitted to Provincial Archives for selection and retention.

Management and the Final Earthwork Quantity computer systems resulted in computer processing of final grading requirements for 530 km of major highway projects, 707 km of project overhaul, 279 borrow pits and three airport projects. Use of computerized methods for calculating final quantities during this period increased by more than 60 percent over the previous year.

During the reporting period, two new enhanced McAUTO Roadway Analysis Design system releases were installed and tested. As well, ROSCOE software was abandoned and replaced with time-sharing option (TSO) and a new menu software system. Training was provided to forty Design Engineering Branch staff prior to implementing use of these systems in production operations.

Further training was also provided to 60 Regional Transportation district staff in use of the remote Mohawk terminal work stations which were installed at fifteen district offices and at three Regional office locations.

Initial training provided to District staff included instructions on computerized methods for obtaining final earthwork quantities, overhaul, and field survey curve computations. Additional follow-up training sessions were also provided for staff at six district transportation offices.

ROADWAY DESIGN SECTION

The Roadway Design Section is responsible for developing and maintaining geometric design standards; preparing right-of-way requests; co-ordinating orders and delivery for construction materials, such as culverts and fencing material; and performing detailed geometric design of all grading projects.

During the 1982/83 fiscal year, detailed preliminary survey instructions for 175 projects totalling 980 km were provided to the Regional Transportation District offices. These projects included multilane freeways and expressways, rural arterial and collector with their associated loops, ramps and service roads.

Detailed designs were completed on 53 projects, totalling 607 km, which included primary, secondary and miscellaneous roads. Almost all designs were done by computer with the exception of intersectional treatment and other roads. In addition, nine projects were designed by the field staff and five projects by the consultants under the supervision of our design engineers.

Four projects of previously designed work were updated by the section to current design standards, and a further 194 intersectional treatment plans were completed.

All cross-section data notes were reduced by computer, and plotted by the Calcomp plotter to a reduced scale convenient for design purposes and field use.

RESEARCH AND DEVELOPMENT BRANCH

The role of the Research and Development Branch is to provide co-ordination and assistance, and to undertake on behalf of all divisions of the department applied research, development and demonstration projects and programs, with particular emphasis on investigating the opportunities for improvements in efficiency and cost-effectiveness in the planning, design, construction, operation, maintenance, and safety of the provincial highway system and its associated plant.

In addition, the branch is the primary contact for co-operative research with outside agencies. The branch is also responsible for the Transportation Library.

During the reporting period, the branch undertook a further 16 projects. This was less than the 27 of the previous year. However, the ones selected for 1982/83 required considerable in-depth study. The projects, grouped into five subject categories, included:

ADAPTATION OF HIGH TECHNOLOGY

- Evaluation of weigh-in-motion scales for pre-screening and sorting of vehicles at Vehicle Inspection Stations and provision of twenty-four-

hour data on vehicle loads and types for future pavement rehabilitation projections.
- Development of a height measuring system at Vehicle Inspection Stations, for determining the height of vehicle loads.
- Evaluation of the feasibility of videologging provincial roads at highway speeds.
- Development of the Mobile Highway Inventory System for videologging roads and gathering physical highway inventory features at highway speeds.
- Evaluation of International Road Dynamics Classifier System for classification of vehicles and traffic flow characteristics for highway planning purposes.
- Evaluation of Ferranti Inertial Road Surveyor for obtaining highway geometrics through non-conventional surveying techniques.
- Evaluation of electronic distance/speed measuring equipment.

ROAD MAINTENANCE
- Evaluation of paints and other materials for road marking.
- Development and testing of paint removal system for pavements through high temperature burning.

MECHANICAL EQUIPMENT IMPROVEMENT
- Investigation of snowplow blade specifications for longer life.
- Provision of remote window control for sander units in winter maintenance activities.

TRANSPORTATION SAFETY
- Development of radar gun and display unit to warn motorists passing through construction zones.
- Evaluation of wildlife warning reflectors along highways.

FUEL ECONOMY AND CONSERVATION
- Fleet evaluation of a fuel economy device on departmental trucks.
- The evaluation of new type of oil by-pass filters and air filters on departmental trucks.

In addition, Research and Development Branch, together with other branches of the department, contributed to co-operative research undertaken with the Roads and Transportation Association of Canada (RTAC) which was of national interest.

This included the following topics: asphalt additives; hot mix recycling; illumination; vehicle weights; uniform special crosswalk; guardrail standards; pavement reflectance; B-train dolly; high speed pavement tester; two-lane capacity; algorithms; commercial vehicles; litigation.

TRANSPORTATION LIBRARY

Transportation Library continued to provide technical information services to all branches, regions and districts of the department as well as to other government agencies, students and members of the general public seeking information on transport related matters.

The library contains approximately 8500 books, 5000 technical reports, and 400 periodical titles. Approximately 2000 U.S. Federal Highway Administration reports are kept in microfiche, together with other statutes, regulations, maps, annual reports and films.

During the year, library staff responded to several thousand requests for information, ranging from quick, factual questions to in-depth, research-oriented requests. Two hundred and thirty-five computer literature searches were conducted on various on-line bibliographic data bases in North America. Two hundred items were borrowed through inter library loan from the University of Alberta and other Government libraries.

Major library projects were: computer-produced keyword index to papers from the Western Association of Canadian Highway Officials (WACHO), and upgrading existing indexes to technical report series; planning for and designing new library facilities for the Twin Atria Building, featuring much-improved work areas for library users.

PROPERTY SERVICES BRANCH

Property Services Branch is responsible for legal surveys of land acquired for transportation facilities; administration of the Municipal Government Act with regard to closure and/or cancellation of public roads; and the leasing and disposition of surplus land and buildings and co-ordinating payment of in lieu of property taxes.

The branch is also responsible for monitoring the land purchase agreements negotiated by regional property agents, and for helping them as required.

These responsibilities are divided into three operational categories: Legal Surveys and Conveyancing; Appraisal and Negotiation; and Compensation.

LEGAL SURVEYS AND CONVEYANCING

During the reporting period, 323 legal surveys were completed for land required for transportation facilities. Of these, 56 were carried out by staff land surveyors and 267 were carried out by land surveyors from the private sector.

The branch continued to receive and record titles to land acquired and to transfer land declared to be surplus. The following is a breakdown of survey

requests and statistics on conveyancing:

Legal Surveys

Requests brought forward from 1981/82	506
Requests received during 1982/83	289
Performed or cancelled during 1982/83	323
Carried forward to 1983/84	472

Titles

Alberta Transportation parcel files received	20
Notifications to registrars of abandonment of roads	608
Letters of abandonment	70
Municipal road closing by-laws received for approval	191
Site leases (surplus land)	117

APPRAISAL AND NEGOTIATION

The branch continued to provide advice and assistance to the regional property agents and appraisers. Agreements negotiated by Regional staff were checked for accuracy and acceptability of conditions prior to submission for payment of compensation.

In total, 2164 agreements for the purchase of land were negotiated by the department's representatives. Seventy-nine independent appraisals were performed for the department by qualified private-sector appraisers.

During the reporting period, 30 expropriations were started and 29 agreements were obtained pursuant to the Expropriation Act.

COMPENSATION

Compensation payments made for land purchased were as follows:

Primary Highways and secondary roads	$ 10,560,531
District Roads	$ 1,129,060
Revolving Fund	$ 6,093,361
Airports	$ 297,674
Land Purchased Fund	$ 1,265,782
TOTAL	$ 19,346,408

Approximately 70 000 title searches were made by staff located in the Land Titles Offices in Calgary and Edmonton. The searches were made to determine ownership for purposes of legal surveying and negotiation and to determine which encumbrances, if any, would affect any payment of compensation.

REGIONAL TRANSPORTATION DIVISION

N. Chorney,
Assistant Deputy Minister

J.A. Glowach,
Executive Director

CONSTRUCTION PROGRAMMING BRANCH

C.D. Burton,
Director

OPERATIONS BRANCH

E. Belsheim,
Director

AVIATION BRANCH

T.M. Watt,
Director

OCCUPATIONAL HEALTH AND SAFETY

C. Kopeck,
Manager

REGIONAL DIRECTORS

C.A. Lendzion,
Southern Region No. 1

B.W. Kathol,
South Central Region No. 2

D.J. Bussard,
Central Region No. 3

H. Hetu,
North East Region No. 4

J.O. Newnham,
North West Region No. 5

R.G. Sharp,
Peace Region No. 6

Regional Transportation Division is responsible for managing the construction and maintenance of the provincial transportation system. The division is composed of the Construction Programming, Operations and Aviation branches and the Occupational Health and Safety Section, plus six regional directors located in strategic centres in the province.

Specifically, the division is responsible for the management and field delivery of the following program elements:

- Regional administration;
- Construction and maintenance of primary highways;
- Construction of approach roads;
- Construction of roads to provincial parks;
- Construction of Vehicle Inspection Stations;
- Construction of secondary roads;
- Construction and maintenance of forestry roads;
- Construction and maintenance of improvement district roads;
- Improvement of resource roads;
- Construction of special projects;
- Pavement rehabilitation;
- Construction of campsites and rest areas;
- Maintenance and operation of ferries;
- Maintenance and operation of forestry airstrips;
- Grants to counties and municipal districts;
- Grant to Special Areas;
- Town and Village Streets Assistance Program;
- Public Transportation Operating Assistance Grant;
- Improvement District Trust Account Program;
- Construction of provincial and community airports;
- Maintenance and operation of provincial airports;
- Air transportation policy;
- Management of the Provincial Airport Development Program;
- Maintenance and operation of provincial airstrips.

In line with government policy to provide Albertans with employment during the current slowdown in the economy, the division administered an Economic Stabilization Program which provided work for 1587 units of heavy construction equipment.

Under the program, improvements were made to approximately 1254 km of roadways.

The Transportation Winter Works Program also provided increased employment to the trucking industry, gravel crushing operators and to heavy equipment owners and operators. A total of 3409 trucks participated in the program.

Divisional regional staff also worked with local governments and Improvement District councils in resolving local issues.

During the 1982/83 season, generally good weather conditions were experienced throughout the province, resulting in all programs being accomplished within budget guidelines.

An analysis of Regional Transportation Division's total expenditures by major categories of activity is shown in Figure 1. Details of the work undertaken by the division's branches are reported on the pages which follow.

1983/84
REGIONAL TRANSPORTATION EXPENDITURES

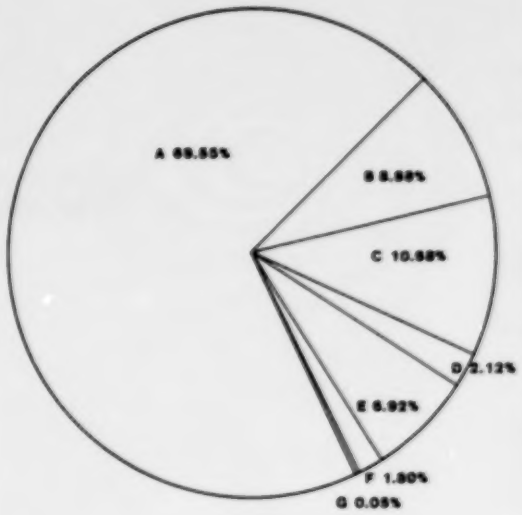

Fig. 1

A. Major construction of primary highways; secondary, approach, park, and resource roads; pavement rehabilitation; and special projects -69.55%

B. Maintenance of highways and ferries - 8.88%

C. Construction and maintenance of Improvement District roads -10.68%

D. Construction and maintenance of airports and airstrips - 2.12%

F. Grants to counties, municipal district, towns, villages and Special Areas - 6.92%

G. Regional Administration - 1.80%

H. Other - 0.05%

CONSTRUCTION PROGRAMMING BRANCH

The responsibilities of the Construction Programming Branch include development of the department's immediate and long-term construction and the development and management of all grant programs.

The work is handled by three sections: Program Development, Program Management and Municipal Services.

PROGRAM MANAGEMENT SECTION

Program Management Section is responsible for the management and delivery of the following programs:

- Construction of primary highways (including the twinning program for Highways 1 and 16);
- Construction of approach roads;
- Construction of roads to provincial parks;
- Construction of Vehicle Inspection Stations;
- Construction of secondary roads;
- Improvement of resource roads;
- Special projects;
- Pavement rehabilitation;
- Construction of provincial and community airports;
- Construction of roads in Kananaskis Country;
- Crushing under the Transportation Revolving Fund and under the Transportation Winter Works Program;

To ensure delivery of the construction programs, the section co-ordinates and schedules interdepartmental engineering activities, monitors construction activity and liaises with outside agencies.

Additional responsibilities include analysis of industry capability and provision of support services to the Regional Transportation Division.

Construction of Primary Highways (Element B2100)

The main emphasis in the primary highways construction program during 1982/83 continued to be the upgrading of older highways and the strengthening of existing pavement structures to meet the demands of increasing road traffic. Grading and paving was continued on highways added to the primary highway system in recent years.

Multilaning of highly congested routes leading into major cities continued to be a priority. Construction on such routes was undertaken during the reporting period on:

- Highway 1 west of Highway 36 to Brooks;
- Highway 1 east of junction Highway 24 to east of Highway 21;
- Highway 16 at Entwistle to west of Wabamun;
- Highway 16X north of Stony Plain to west of Edmonton;
- Highway 63 through Fort McMurray.

A major accomplishment under this program was completion of the base course stage of the last section of Highway 2 between Athabasca and Hondo. This 1300 km highway is now asphalt-surfaced from the United States border to the British Columbia border.

Street improvements were made to 14 primary highways through cities, towns and villages. Of these, four were carried forward from 1981/82. Two projects are being carried over to 1983/84 for completion.

The work was directed and supervised by consulting engineering firms working for the respective city, town or village under the terms of agreement with the department.

During the reporting period, construction was completed on 2223 km of highway, of which 202 km was performed under the twinning program. This included the extension of new paved surfaces on 357 km of roadway.

Expenditures for primary highway construction totalled $250,265,368. The different types of work undertaken were:

	REGULAR PROGRAM	TWINNING PROGRAM HWYS 1 & 16
GRADING	379.73 km	78.18 km
GRANULAR BASE COURSE	317.86 km	56.60 km
ASPHALTIC STABILIZED BASE COURSE	204.37 km	8.86 km
CEMENT STABILIZED BASE COURSE	28.22 km	—
ASPHALT SURFACE	332.10 km	95.58 km
RECYCLED ASPHALT PAVEMENT	4.00 km	—
PRELIMINARY ENGINEERING	594.45 km	112.75 km
DUST ABATEMENT	2.50 km	—
SEAL COAT APPLICATION	661.20 km	—
STREET IMPROVEMENT	7.67 km	—
REGRAVELLING	22.41 km	—
TOTAL TASK	2 554.51 km	351.97 km

Construction of Approach Roads (Element B4200)

Construction of approach roads to those towns and villages located some distance from the main highway routes continued to be co-ordinated with major projects in each the area. Access projects to 15 communities were underway during 1982/83. (Two of these projects were carried over from 1981/82. Construction affected 26.36 route kilometres. Expenditures totalled $3,247,945.

The different types of work undertaken by kilometre were:

GRADING	7.22km
GRANULAR BASE COURSE	10.72 km
ASPHALT SURFACE	13.74 km
PRELIMINARY ENGINEERING	3.13 km
SEAL COAT APPLICATION	7.86 km
TOTAL TASK	42.67 km

Construction of Roads to Provincial Parks (Element B2500)

A total of 43.8 km of road to provincial parks was constructed for an expenditure of $2,696,163.

Base course was completed to Hilliard's Bay and paving was completed to Lesser Slave Lake, Cold Lake and Gregoire Lake Provincial Parks.

The different types of work undertaken by kilometre were:

GRAVEL BASE COURSE	10.62 km
ASPHALTIC STABILIZED BASE COURSE	6.44 km
ASPHALT SURFACE	21.59 km
PRELIMINARY ENGINEERING	14.18 km
MISCELLANEOUS	1.78 km
TOTAL TASK	54.61 km

Construction of Vehicle Inspection Stations (Element B2600)

This program involved the construction of entrance, exit, by-pass lanes and parking areas at Vehicle Inspection Stations.

Major construction was carried out at the Burmis, Vermilion and Grimshaw stations. Projects carried over from 1981/82 at Balzac, Yellowhead and Grande Prairie were completed. Land was purchased for a new installation at Demmitt and preliminary engineering was completed.

Construction of Secondary Roads (Element B3100)

Improvements were undertaken on 2479 km of secondary road. Expenditures totalled $102,703,130.

Demand for improvements to the secondary road network by municipal and improvement district councils continued to be high. Grade improvements in preparation for surfacing were again a priority, increasing by 47.8 percent over the previous year.

Two projects were performed under an agreement with Keyano College whereby heavy equipment operators were trained under actual field conditions.

Improvements were also made to secondary roads through towns and villages. The work was directed by consulting engineering firms working for the urban municipalities under agreement with the department.

The different types of work undertaken by kilometres were:

GRADING	677.78 km
GRAVEL BASE COURSE	296.67 km
ASPHALTIC STABILIZED BASE COURSE	242.79 km
CEMENT-STABILIZED BASE COURSE	96.02 km
ASPHALT SURFACE	274.60 km
PRELIMINARY ENGINEERING	696.23 km
DUST ABATEMENT	516.12 km
SEAL COAT APPLICATION	27.98 km
STREET IMPROVEMENT	15.14 km
REGRAVELLING	86.01 km
TOTAL TASK	2929.54 km

Special Projects (Element B3400)

Under the Special Projects Program, $3,241,302 was spent on improvements to Highway 67. Grading was completed between the Wabasca River and Senex Creek and final paving was completed from south of Lily Creek to the junction of Secondary Road 754.

The different types of work undertaken by kilometres were:

GRADING	4.85 km
ASPHALT SURFACE	18.53 km
PRELIMINARY ENGINEERING	33.28 km
SEAL COAT APPLICATION	16.32 km
TOTAL TASK	72.98 km

Improvement of Resource Roads (Element B5100)

The demand continued during this reporting period for improvements to roads carrying resource and public traffic. Roads were constructed to a high standard to allow large transport trucks to operate year-round.

Improvements were made to 550 km of road for a total expenditure of $37,296,229. Five major bridge structures were funded under this program. The different types of work undertaken by kilometre were:

GRADING	213.65 km
GRAVEL BASE COURSE	109.77 km
ASPHALTIC STABILIZED BASE COURSE	76.88 km
STABILIZED BASE COURSE	21.90 km
ASPHALT SURFACE	117.10 km
PRELIMINARY ENGINEERING	139.93 km
DUST ABATEMENT	19.30 km
REGRAVELLING	18.00 km
TOTAL TASK	716.52 km

Pavement Rehabilitation (Element B9100)

In recent years, increased traffic, heavier loading and generally warmer winter temperatures greatly increased the severity of stress on provincial paved highways. Much of the older pavement require strengthening and some repair.

To protect the structural integrity of exisiting pavement, a program of pavement rehabilitation was initiated. During the past year, projects have included recycling of existing asphaltic pavement in areas where raw aggregate was in short supply.

Pavement rehabilitation was undertaken on 488 km of highway at a total cost of $45,731,800.

Construction of Airports (Elements D2100 and D2200)

Major provincial airport projects in the reporting period included the paving and initiation to full operational status of the new airport at Manning, (complete with water-bomber base facilities for the Alberta Forest Protection Branch) and the late fall start on construction of a new gravel forestry airport at Loon River.

Additional expenditures were mainly for the upgrading of facilities at other provincial airports to meet safety and operational requirements of airport users.

Community airports were completed at Vauxhall, Olds/Didsbury and Killam/Sedgewick. A start was made on construction of new airports at Empress and Elk Point, and airport construction was continued at Forestburg.

The largest project in the year was the

CONSTRUCTION OF PROVINCIAL AIRPORT FACILITIES

Element D2100
Expenditures for 1982/83 Fiscal Year

Job No.	Airport No.	Airport Location	Type of Work	Total Expenditure
F970A	89	Calgary A.F.S. Base	- Grading - A.C.P. - Seeding	$ 5,211
K970A	103	Lloydminster	- Drainage Improvement - Seeding - Grade	39,752
K971L	103	Lloydminster	- Lighting	3,101
M970A	3	Ft. McMurray A.F.S. Base	- Rouguen Loading Pads & Apply Traction	2,237
M970B	8	Lac La Biche	- Grade & Gravel Development Area	34,104
N970A	87	Cooking Lake	- Survey - Clearing - Gravelling - Purchase Boat	45,349
P970A	40	Grande Cache	- Vasis Installation	49,088
P970C	40	Grande Cache	- Install Emergency Lighting	107,518
P970D	6	Whitecourt	- Fencing - Clearing - Grading - Engineering	90,994
P971L	6	Whitecourt	- Vasis Installation	17,726
P971M	23	Jasper/Hinton	- Vasis Installation	17,376
R970A	104	Calling Lake	- Preliminary Survey	9,912
R970B	80	Swan Hills	- Seeding - Install NDB/DME	28,941
R970D	104	Calling Lake	- Clearing - Survey & Soils Test	6,781
V970A	68	Loon River	- Survey & Soils Test - Grading - Engineering	471,278
V970B	68##	Loon River	- Gravel Crushing - Engineering	136,413
V970D	50	Slave Lake	- Survey	11,484
V970E	50	Wabasca	- Survey - Stockpile Pit Run Gravel	299,137
V971L	50	Slave Lake	- Install Vasis	15,451
Y970A	42	Manning	- Contract - Materials - Engineering	1,024,135
Y971L	42	Manning	- Lighting Contract	59,023
TOTAL				$ 2,475,011

Winter Works

CONSTRUCTION OF COMMUNITY AIRPORT FACILITIES

Element D2200
Expenditures for 1982/83 Fiscal Year

Job No.	Airport No.	Airport Location	Type of Work	Total Expenditure
A972A	37	Bassano	- Survey & Soils Test	$ 10,157
B972A	35	Taber	- Survey - Air Terminal Grant	23,261
B972B	89	Milk River	- Drainage Repairs - Lighting Repairs	13,358
B972C	98	Warner	- Runway Oil Treatment	42,386
B972D	33	Claresholm	- Survey - Runway Marking Contract	7,669
B972E	65	Vulcan	- Seeding	7,525
B972F	48	Vauxhall	- Contract - Materials - Engineering - Claim for Overhaul Compensation	692,430
B973L	65	Vulcan	- Lighting Contract - Materials - Engineering	26,853
B973M	48	Vauxhall	- Lighting Contract - Materials - Powerline - Engineering	18,985
C972A	36	Hanna	- Legal Fees for Land Expropriation	2,311
C972B	110	Empress	- Land Aquisition Compensation - Contract - Materials - Engineering	348,482
C972C	32	Drumheller	- Contract - Materials - Engineering	687,559
C973G	57	Oyen	- Air Terminal Grant	20,086
C973H	5	Three Hills	- Air Terminal Grant	20,000
C973K	110	Empress	- Lighting	20,032
C973M	32	Drumheller	- Lighting Contract - Materials - Engineering	25,571
F972A	45	Olds/Didsbury	- Contract - Materials - Engineering - Air Terminal Grant	660,628
F972B	109	Beiseker	- Survey & Soils Test - Land Purchase	208,294
F973F	59	High River	- Air Terminal Grant	20,000

(continued)

CONSTRUCTION OF COMMUNITY AIRPORT FACILITIES

Element D2200
Expenditures for 1982/83 Fiscal Year

(continued)

Job No.	Airport No.	Airport Location	Type of Work	Total Expenditure
F973L	45	Olds/Didsbury	- Lighting Contract - Materials - Powerline - Engineering	29,698
H972B	64	Killam/Sedgewick	- Contract - Materials - Engineering	601,954
H972C	105	Forestburg	- Contract - Materials - Engineering	780,882
H972D	15	Provost	- Contract - Materials - Engineering	288,678
H972H	64	Killam/Sedgewick	- Seeding	4,489
H972G	64	Killam/Sedgewick	- Air Terminal Grant	20,000
H973L	64	Killam/Sedgewick	- Lighting Contract - Materials - Powerline - Engineering	38,387
H973M	105	Forestburg	- Lighting Contract - Materials - Powerline - Engineering	20,715
J972A	31	Red Deer	- Contract - Materials - Engineering - Land Purchase & Compensation - Runway Marking	2,684,628
J972B	22	Westaskiwin	- Land Expropriation - Legal Fees - Taxiway Gravel	69,356
J972C	41	Lacombe	- Purchase of Land - Survey & Soils Test	22,525
J972F	79	Innisfail	- Contract - Materials - Engineering - Runway Marking	39,182
J973K	31	Red Deer	- Lighting Contract - Materials - Engineering	109,105
K972B	82	Viking	- Seeding	5,090
K972D	17	Redwater/Andrew	- Survey & Soils Test - Land Purchase	279,254

(continued)

CONSTRUCTION OF COMMUNITY AIRPORT FACILITIES

Element D2200
Expenditures for 1982/83 Fiscal Year
(continued)

Job No.	Airport No.	Airport Location	Type of Work	Total Expenditure
K973G	41	Wainwright	- Air Terminal Grant	$ 20,000
K973L	82	Viking	- Lighting Contract	519
M972A	58	Elk Point	- Contract - Materials - Engineering - Land Purchase - Zoning Tree Clearing - Relocation of Utilities - Survey	309,240
M972B	12	Bonnyville	- Contract - Materials - Engineering	117,130
M973L	58	Elk Point	- Lighting	18,479
N972A	71	Mayerthorpe	- Site Prep. - Caretakers Res.	5,000
N972B	52	Drayton Valley	- Repair, Regravel & Improve Drainage in parking Lot - Powerline Burial - Air Terminal Grant	39,510
R972A	25	Westlock	- Contract - Materials - Engineering	499,092
R972B	9	Barrhead	- Drainage Improvement	29,804
V973G	43	Smoky River	- Air Terminal Grant	20,000
W972A	109	Eaglesham	- Survey - Land Purchase	86,182
W972B	56	Beaverlodge	- Survey & Soils Test	5,291
W972C	47	Valleyview	- Clearing - Air Terminal Grant	20,240
W972D	49	Spirit River	- Land Purchase	31,931
Y972A	55	Fairview	- Soils & Survey Test	13,937
D2290	—	Head Office	- Miscellaneous	$ 22,893
TOTAL				$ 9,088,778
D2200	—	Credit (Olds/Didsbury Lighting F973L)		1,486
TOTAL				$ 9,087,292

construction of a 5,000 foot runway and associated taxiways on the Red Deer airport. Other projects included paving overlays and rehabilitation work at older airports, and acquisition of land for future construction.

A new feature in 1982/83 was the provision of grants of $20,000 for each of 10 community airports, to be applied to the development of airport terminal buildings.

Expenditure on the construction of airport facilities amounted to $11,562,682 and are summarized in Schedule RT.

MUNICIPAL SERVICES SECTION

The following major programs are planned, developed and managed by the Municipal Services Section:

- Construction and maintenance of improvement district roads;
- Improvement District Trust Account Program;
- Grants to counties and municipal districts;
- Town and Village Streets Assistance Program;
- Construction and maintenance of forestry roads;
- Public Transportation Operating Assistance Grant Program;
- Grant to Special Areas;
- Engineering Support Program;
- Maintenance and operation of forestry airstrips;
- Development of Resource Road Improvement Program.

In addition to these regular programs, an

Economic Stabilization Program and a Transportation Winter Works Program were developed and manged by this section.

The Municipal Services Section is also responsible for monitoring and evaluating all these programs and for providing necessary interdepartmental liaison and support services to the department's regions and districts.

Construction and Maintenance of Improvement District Roads (Elements B3500, B6100)

The Economic Stabilization Program was continued in order to provide employment for smaller-scale operators of heavy oilfield equipment laid idle by the federal energy policy. The program provided $10 million for road construction within the 15 provincial improvement districts. Favourable weather experienced during the summer permitted early completion of these construction programs.

Also, $10 million was provided for access and internal road construction on the Indian reserves and Metis settlements in the province.

A summary of expenditures under the regular grant for construction in improvement districts and for the Economic Stabilization Program is shown in Schedule RT. The regular construction grant portion included allocations of:

- $492,600 for the Improvement District Hamlet Streets Assistance Grant;
- $2,350,000 for new access to public lands recently opened up for settlement by the Public Lands Division of Alberta Energy and Natural Resources;
- $680,000 for road projects required in conjunction with the Land Tenure Secretariat Program in isolated communities;
- $4,526,881 for local winter road construction, surface treatment, gravel stockpiling and crushing under the Transportation Winter Works Program.

During the reporting period, a total of $15,590,654 was expended on summer and winter maintenance tasks for all improvement district roads under the department's jurisdiction, including public roads through Indian reserves.

In addition, $7,717,458 was expended for maintenance, gravel stockpiling and crushing under the Transportation Winter Works program.

Trust funds provided to the department by Alberta Municipal Affairs totalled $17,818,864.

The different types of work undertaken on improvement district roads, by kilometre, were:

Grading	109.70 km
Gravelling	4133.10 km
Dust abatement (oiling)	4.60 km
Asphalt Surfacing	6.40 km
TOTAL	4253.60 km

Grants to Counties and Municipal Districts (Element B4200)

A total of $35,168,570 was expended on capital road improvements. Included in this total is an expenditure of $9,400,000 under the County and Municipal District segment of the Economic Stabilization Program.

The breakdown into the categories of expenditures was:

Regular Road Grant	$	21,218,029
Economic Stabilization Program		9,400,542
Special Grants		3,598,452
Hamlet Streets Assistance Grant		801,547
Municipality of Crowsnest Pass (Transition Grant)		150,000
TOTAL	$	35,168,570

Town and Village Streets Assistance Program (Element B4400)

Seventy-three towns, villages and summer villages benefited from the funds provided by the Town and Village Streets Assistance Program. A total of $6,592,572 was expended on projects such as grading and gravelling, storm sewer, curb and gutter, base course and surface course paving, sidewalks and street oiling.

The reporting period was the last year of the current five-year program.

Construction and Maintenance of Forestry Roads (Element B3200)

A total of $3,985,796 was expended during the reporting period on the 4000 km forestry road system. Projects carried out were determined through consultation with the Alberta Forest Service, (AFS) of Alberta Energy and Natural Resources.

Engineering Support Program (Element B4100)

The Engineering Support Program provides assistance to counties, municipal districts and Special Areas. As more and more of these jurisdictions plan better roadways, the requirement for departmental engineering services increases.

Grants are based upon the level of the department's regular road construction grant to each jurisdiction, and are intended to assist with engineering on regular road grant projects. The total expenditure for this program was $709,322.

Public Transportation Operating Assistance Grant (Element F3200)

This reporting period was the fourth year of the six-year Public Transportation Operating Assistance Grant for transportation services to senior citizens, disabled and handicapped persons.

Initially, the program's grant of up to $2 per capita was provided only to towns. This policy was expanded in 1980/81 to include villages, counties, municipal districts, improvement districts, and Special Areas.

During the current reporting period, grant funds were allocated as follows:

Towns	$	629,908
Villages		91,670
Counties		433,936
Municipal districts		192,828
Improvement districts		133,894
Special areas		12,522
TOTAL	$	1,494,758

Grants to Special Areas (Element B4300)

The department's annual grant to the Special Areas was $1,528,000. These funds were used for local and secondary road capital construction projects within Special Areas 2, 3 and 4. In addition to this regular grant, the Economic Stabilization Program provided $600,000 to the Special Areas.

Maintenance and Operation of Forestry Airstrips (Element D3200)

There are 73 forestry airstrips located in the provincial forest areas. These airstrips are used mainly to support firefighting operations.

During the reporting period, 53 of the airstrips required maintenance to ensure a suitable condition to permit landing by fire fighting air support aircraft. $242,793 was spent on these airstrips during 1982/83.

Expenditures for the year ended March 31, 1983 are shown in the following tables.

ENGINEERING SUPPORT
Element B4100
1982/83 Fiscal Year

COUNTIES	Expenditures
Grande Prairie No. 1	$ 28,087
Vulcan No. 2	20,630
Ponoka No. 3	15,000
Newell No. 4	14,368
Warner No. 5	17,525
Stettler No. 6	16,210
Thorhild No. 7	10,503
Forty Mile No. 8	22,187
Beaver No. 9	14,000
Wetaskiwin No. 10	13,000
Barrhead No. 11	15,826
Athabasca No. 12	17,428
Smoky Lake No. 13	13,055
Lacombe No. 14	13,000
Wheatland No. 16	13,000
Mountain View No. 17	14,000
Paintearth No. 18	11,842
St. Paul No. 19	10,430
Strathcona No. 20	13,120
Two Hills No. 21	12,000
Camrose No. 22	16,015
Red Deer No. 23	7,520
Vermilion River No. 24	20,000
Leduc No. 25	15,703
Lethbridge No. 26	17,719
Minburn No. 27	13,000
Lac Ste. Anne No. 28	16,000
Flagstaff No. 29	12,922
Lamont No. 30	11,000
Parkland No. 31	20,000
MUNICIPAL DISTRICTS	
Cardston No. 6	9,119
Pincher Creek No. 9	9,486
Taber No. 14	14,860
Willow Creek No. 26	15,221
Foothills No. 31	15,000
Acadia No. 34	3,796
Rocky View No. 44	19,000
Starland No. 47	10,943
Kneehill No. 48	12,582
Provost No. 52	10,000
Wainwright No. 61	11,000
Bonnyville No. 87	13,000
Sturgeon No. 90	16,451
Westlock No. 92	16,376
Smoky River No. 130	16,000
Spirit River No. 133	4,083
Peace No. 135	4,000
Fairview No. 136	6,953
Special Areas	46,361
TOTAL	$ 709,321

PROGRAM DEVELOPMENT SECTION

This section is responsible for programming and advance scheduling of the following activities:

- Primary Highways Construction Program;
- Pavement Rehabilitation Program;
- Kananaskis Country Program;
- Secondary Roads Program;
- Ring Roads and Inter-city Connections;
- Approach Road Construction Program;
- Park Roads Construction Program;
- Special Projects Construction Program;
- Highway 1 and 16 Four Lane (Twinning) program;
- Special Programs (e.g. Fort McMurray).

This section is also responsible for advance program co-ordination of the primary construction schedule, the Bridge Construction program, and the Vehicle Inspection Station program.

IMPROVEMENT DISTRICTS

Appropriation 1555, Elements B6100, B3500 and B3200
Expenditures for the year ended March 31, 1983

Improvement District	Trust Funds (Appr. 1555)	Maintenance (Ele. B6100)	Construction (Ele. B3500)	Forestry Roads (Ele. B3200)
1	$ 2,850,000	$ 1,369,890	$ 501,829	$ —
6	232,958	402,928	297,046	143,341
7	85,000	183,104	545,672	—

8	500,000	1,099,388	239,715	204,886
10	3,300,000	1,426,033	1,641,799	476,993
14	1,705,170	3,575,288	3,134,998	325,253
15	1,430,000	670,505	1,826,456	—
16	1,800,045	1,342,470	2,442,990	1,251,215
17	1,530,000.00	3,956,629	9,838,751	440,193
18	2,180,748	4,106,498	4,730,655	526,835
19	298,742	769,956	1,916,572	—
20	408,400	916,535	3,861,055	10,862
21	355,000	719,135	3,876,307	99,746
22	430,377	950,122	3,046,630	74,289
23	712,424	1,234,984	3,678,365	432,184
	17,818,864	22,723,465	41,578,840	3,985,797
		Indian Reserves		
District				
2	—	153,524	—	—
4	—	232,486	—	—
6	—	70,931	—	—
7	—	26,144	—	—
9	—	58,992	—	—
12	—	4,765	—	—
15	—	37,815	—	—
	—	$ 584,657	—	—
	$ 17,818,864	$ 23,308,122	$ 41,578,840	$ 3,985,797

MAINTENANCE AND OPERATION OF FORESTRY AIRPORTS

Expenditures for 1982/83 Fiscal Year
Element D3200

B980A	Cowley	$ 6,230	P980L	Thunder Lake	17
J980A	Clearwater	3,673	P980N	Wildhay	276
J980B	Ram Falls	1,320	P980P	Wolf Lake	28
J980C	Shundra	805	R980A	Calling Lake	1,277
J98OD	Sundre	1,358	V980A	Wabasca	5,505
M980A	Agnes Lake	923	V980C	Red Earth	20,177
M980B	Algar Tower	2,876	V980D	Slave Lake	13,142
M980C	Birch Mountain	546	W980A	Berland Tower	143
M980D	Bitumont	2,707	W980D	Fox Creek	4,688
M980E	Christina Basin	5,227	W980G	Sherman Meadows	4,630
M980F	Conklin	1,036	W980H	Valleyview	42
M980G	Cowper	2,646	W980J	Smoky City	9,684
M980H	Edra	1,062	Y980A	Bison Tower	12,749
M980J	Embarras	617	Y980B	Cadotte Lake	6,714
M980K	Grande	1,223	Y980C	Worsley	2,515
M980L	Gordon Lake	4,258	Y980D	Manning	630
M980M	Grist Lake	1,819	Y980E	Basnett	6,938
M980N	Jean Lakes	1,126	Y980F	Doig	5,353
M980P	Johnson Lake	1,609	Y980G	Hotchkiss	595
M980R	Muskeg Mountain	2,807	Y980M	Notikewin	6,660
M980S	Richardson Tower	5,411	Z980A	Amber	10,601
M980T	Round Hill	623	Z980D	Fontas	2,031
M980U	Janvier	1,717	Z980L	Wadlin Tower	0.00
M981Y	District 11 - General	63,284	Z980M	Yates	660
P980B	Cabin Creek	3,048	Z980P	Keg Tower	660
P980D	Entrance	176	Z980Q	Lambert Tower	698
P980J	Mayberne	121	Z980T	Margaret Lake	7,980
P980K	Steeper	149		TOTAL	$ 242,790

GRANTS TO COUNTIES AND MUNICIPAL DISTRICTS

Element B4200
Expenditures for 1982/83 Fiscal Year
Summary

County of Grande Prairie	1	$ 1,774,310	County of Minburn	27	667,121
County of Vulcan	2	720,804	County of Lac Ste. Anne	28	1,000,406
County of Ponoka	3	725,246	County of Flagstaff	29	713,106
County of Newell	4	1,056,613	County of Lamont	30	541,872
County of Warner	5	672,647	County of Parkland	31	987,803
County of Stettler	6	803,737	Municipal District of Cardston	6	389,129
County of Thorhild	7	746,283	Municipal District of Pincher Creek	9	420,824
County of Forty Mile	8	1,027,043	Municipal District of Taber	14	781,508
County of Beaver	9	605,352	Municipal District of Willow Creek	26	591,156
County of Wetaskiwin	10	827,178	Municipal District of Foothills	31	567,643
County of Barrhead	11	675,257	Municipal District of Acadia	34	274,019
County of Athabasca	12	1,308,417	Municipal District of Rocky View	44	720,303
County of Smoky Lake	13	853,379	Municipal District of Starland	47	528,526
County of Lacombe	14	909,580	Municipal District of Kneehill	48	688,467
County of Wheatland	16	688,056	Municipal District of Provost	52	653,408
County of Mountain View	17	603,369	Municipal District of Wainwright	61	707,247
County of Paintearth	18	479,660	Municipal District of Bonnyville	87	697,434
County of St. Paul	19	1,052,029	Municipal District of Sturgeon	90	660,269
County of Strathcona	20	438,296	Municipal District of Westlock	92	990,021
County of Two Hills	21	594,741	Municipal District of Smoky River	130	849,059
County of Camrose	22	648,248	Municipal District of Spirit River	133	267,642
County of Red Deer	23	804,802	Municipal District of Peace	135	275,270
County of Vermilion River	24	1,115,782	Municipal District of Fairview	136	337,870
County of Leduc	25	935,915	Municipality of Crowsnest		150,000
County of Lethbridge	26	641,721	TOTAL		$ 35,168,568

GRANTS TO TOWNS AND VILLAGES STREET IMPROVEMENTS

Element B4400
Expenditures for 1982/83 Fiscal Year

Acme	$ 332,000	Elnora	5,397
Airdrie	525,900	Falher	120,000
Alberta Beach	58,400	Ferintosh	848
Andrew	14,000	Fort Saskatchewan	142,642
Arrowwood	13,960	Gadsby	2,820
Barrhead	300,000	Gibbons	112,300
Barons	8,509	Gleichen	50,340
Beisker	60,000	Grande Cache	295,510
Blackie	49,740	Grassy Lake	18,109
Carstairs	120,480	Gull Lake	15,520
Cayley	12,475	Hairy Hill	35,760
Chauvin	11,770	Hanna	519,423
Clive	13,758	High Prairie	335,000
Cochrane	243,960	Hussar	41,460
Consort	32,131	Kapasiwin	8,223
Crossfield	79,013	Kinuso	245,080
Crowsnest Pass	41,280	Lakeview	5,940
Crystal Springs	12,580	Ma-Me-O Beach	10,742
Donalda	2,082	Millet	109,560
Donnelly	15,303	Milo	36,420
Duchess	20,901	Mirror	10,438
Edberg	38,165	Mundare	100,000

Myrnam	25,222	Sexsmith	159,929
Nakamun Park	10,480	Silver Beach	748
Nampa	51,120	Silver Sands	1,865
Nampa	5,500	Spruce Grove	4,500
New Norway	25,000	Stirling	69,840
Norglenwold	15,580	Swan Hills	273,601
Penhold	121,080	Taber	124,022
Ponoka	26,509	Veteran	31,827
Provost	121,058	Vulcan	146,264
Radway	43,080	Wabamun	68,880
Redcliff	248,460	West Cove	648
Rochon Sands	6,089	Westlock	300,000
Rockyford	13,460	Whitecourt	354,480
Rosemary	48,660	Yellowstone	3,248
Sandy Beach	13,900	Youngstown	2,744
Sangudo	46,840	TOTAL	$ 6,592,573

OPERATIONS BRANCH

During the fiscal year 1982/83, Operations Branch was responsible for co-ordinating and monitoring the department's primary highway maintenance, bridge maintenance, and provincial airport development programs. The branch is also responsible for the management of campground and ferry construction programs.

On January 1, 1983, the Bridge Maintenance Program was transferred to the Bridge Engineering Branch while the Airport Section became a separate branch. Activities of the branch during 1982/83 are described in this part of the report, for convenience.

The major areas of activity of Operations Branch during the past fiscal year were:

- Maintenance of primary highways;
- Construction of campsites and rest areas;
- Maintenance and operation of ferries; and
- Administration and operation of nine construction camps.

MAINTENANCE OPERATIONS SECTION

Maintenance Operations Section's mandate is the establishment and monitoring of standards of primary highway maintenance; equitable distribution throughout the province of primary highway maintenance allocations; overall co-ordination of programs involving rest areas, campgrounds, the ferry system, and the department's maintenance yards; and the supervision and direction of nine construction crews.

In addition, during the current reporting year the Maintenance Operations Section was responsible for co-ordinating all trucking requirements for the successful completion of the Winter Works Stockpiling Program.

Maintenance of Primary Highways (Element B5100)

Maintenance of primary highways accounts for an expenditure of $56,110,197. The different types of maintenance, by kilometre, were:

	Gravelled	Oiled	Paved
Primary Highways	1,352.02	1,190.04	11,499.51
Access Roads	19.08	38.65	244.25
	1,371.10	1,228.69	11,743.76

Following are summaries of the projects accomplished by the section's various segments.

Erosion Control Program

A total of 156 erosion control projects were completed during the 1982/83 construction season. This resulted in 17,530 acres of right of way, borrow areas and gravel pits being seeded to grass and fertilized along Primary Highways, Secondary Roads, Resource Roads, Improvement Districts and Local Roads, on Airports and in Kananaskis Country, for a total expenditure of $1,771,624.

Only 16 shifts were lost due to adverse weather.

4-H Clean-Up Program

During the 1982/83 4-H Clean-Up Campaign, 6,494 children, representing 412 clubs, participated in the clean-up of Alberta highways rights of way. A total of 6214 kilometres were cleaned and 50 182 bags of litter were collected. Clubs earned $81,188. Total program expenditure was $190,000.

Signing Program

Major signing was completed on all construction projects, involving the placing of approximately

5000 signs. In addition, 102 signs with breakaway bases were installed on existing and new projects. Traffic signals and crosswalk signals were installed at 20 different locations.

Guardrail Program

The raising of substandard guardrail to appropriate heights and the installation of guardrail on new projects totalled 114 000 metres.

Approximately 7000 road edge delineators were installed in combination with this work.

Seal Coating Program

The department's two seal coat camps accomplished asphaltic seal coat application on 713 km of primary highways at a cost of $4,634,081, during the reporting period. Twenty-six km of roadway were seal coated on the secondary road system, 8 km on approach roads and 16 km on oiled surface roadways.

A total of $2,544,674 was expended for crushing-chip materials for use on the province's paved highways. Washing of crushed chips amounted to $701,523, of which $156,062 was undertaken by private contractors.

During the construction season, adverse weather conditions did not allow for completion of the program. However, as the construction season progressed, priorities were established and the most necessary work was completed. Those projects programmed but not completed were carried over to the 1983/84 fiscal year.

Surfacing and Base Course Program

10.8 km of Secondary Road 771 were serviced from the junction of Highway 53 to the Rimbey Gas Plant. Nine projects were also completed in Kananaskis County. Total expenditures for all work completed by this camp unit amounted to $3,363,682.

Approximately 19.6 km of base work was completed on Highway 47 from south of Lambert Creek to Highway 16. Total expenditure for this work was $3,014,610.

Maintenance and Operation of Ferries

In the 1982/83 fiscal year, Operations Branch was responsible for the operation and maintenance of eight ferries throughout the province.

In addition, Alberta Transportation shared the cost of operating and maintaining the Meridian Ferry, north of Lloydminster, with the Province of Saskatchewan. Some addtional site clean-up was undertaken at the former Pakan Ferry site. Total expenditure of $1,186,069 was distributed as follows:

Finnegan, Red Deer River	$ 72,486
Red Deer River	87,117
Crowfoot, Bow River	72,938
Meridian, Lloydminster	56,137
Berrymoor, North Saskatchewan River	101,665
Rosevear, McLeod River	80,983
Klondyke, Athabasca River	351,422
Shaftesbury, Peace River	150,838
La Crete, Peace River	211,560
Pakan, North Saskatchewan River	924
TOTAL	$1,186,070

A new steel scow was designed for the Klondyke crossing of the Athabasca River north of Barrhead. Construction of this unit will be completed in 1983. When in operation it will more efficiently accommodate local traffic and will be capable of handling large farm implements as well as heavy industrial traffic.

Construction of Campsites and Rest Areas

Regional Transportation continued its program of upgrading existing campsites. During the reporting year, a contract was awarded for the construction of the Edson Rest Area. Progress at the site was slower than anticipated, however. Consequently, the facility is now scheduled for completion during the summer of 1983.

CONSTRUCTION OF CAMPSITES AND REST AREAS ELEMENT B2300

Expenditures for 1982/83 Fiscal Year

District No.	Expenditure
1	$ 19,516
2	15,589
3	148
4	1,242
5	7,650
6	52,360
10	8,401
11	16,481
7	25,205
8	620,166
9	43,883
12	68,943
13	130,598
15	13,309
	$ 1,023,491

CONSTRUCTION OF CAMPSITE AND REST AREAS ELEMENT B2300

Expenditures for 1982/83 Fiscal Year

Job No.	Campsite	Expenditure
A770D	Dunmore	$ 14,872
A77OE	Dunmore (Seal Coat Application)	4,644
B770A	Island Lake	15,589
C771A	New Brigden	148
F770K	Crossfield Rest Area	1,213
F770M	Crossfield Rest Area	29
H770B	Meeting Creek	20
H770E	Daysland	3,720
H770F	Hardisty	1,865
H770G	Czar	2,045
J770C	Buck Lake	4,632
J770J	Rimbey	12,858

J770K	Alix	12,820
J770L	Ponoka North	22,050
K770M	Ranfurly	2,528
K770N	Elk Island	3,221
K770P	Kitscoty	2,652
M771S	Victoria	8,290
M771T	Various Campsite District 11	8,191
N770D	Spruce Grove	586
N770G	Gunn	8,811
N770J	Sandy Lake	8,123
N770K	East of Bretona	7,685
P770Q	Edson Rest Area	620,166
R770A	Flatbush	11,035
R770B	Vimy	3,622
R770C	Freedom	10,983
R770D	Rochester	4,533
R770E	Holmes X-ing	4,659
R770G	Egremont	6,864
R770H	Chisholm	2,188
V771A	Little Smoky River	60,549
V771B	Jerry Creek	7,339
V772A	Peavine Creek	1,055
W770F	Webster Truck Turn-out	1,639
W770G	Demmitt	2,805
W770H	Losegun	16,155
W770J	Hythe	110,000
Z770A	High Level	1,440
Z770B	Boyer River	6,955
Z770C	Ft. Vermilion	629
Z770D	La Crete Ferry Site	4,285
	TOTAL	$ 1,023,493

AVIATION BRANCH

Aviation Branch is responsible for the overall management of the Provincial Airport Development Program. Meetings were held with local officials in many communities during the reporting period to provide information on the program, for establishment of local airport commissions, and advice and assistance in solving local operating problems.

Several applications were received requesting assistance for airport development or improvement. Site selections and evaluations were carried out at various locations.

Liaison was continued with aviation-related industries and organizations. Aviation Branch was represented on bodies such as the Edmonton Area Air Services Authority, the Transport Development Authority of Calgary, the Alberta Aviation Council, the Air Transport Association of Canada, the Canadian Aeronautics and Space Institute and the International Northwest Aviation Council.

Background information, technical advice and position papers for senior management were provided on a wide variety of aviation subjects, either as part of departmental initiatives or in response to federal activities in both the operational and policy areas of air transportation.

During the summer of 1982, official opening ceremonies were held at four community airports in Mayerthorpe, Viking, Vulcan and Wetaskiwin.

AIRPORT OPERATIONS AND MAINTENANCE

Aviation Branch is responsible for co-ordinating the operation and maintenance of 15 provincial airports. With the exception of Fort Vermilion, each airport has full-time staff who report to headquarters through the director of the region in which the airport is located.

Aviation Branch also has responsibility for the civilian Medley Air Terminal at Canadian Forces Base Cold Lake, and for a non-directional radio navigation beacon at the St. Paul community airport.

Expenditures on these operations and maintenance activities during the reporting period totalled $1,846,515.

Airport Location	Expenditure
Pincher Creek	$ 112,616
Rocky Mountain House	104,748
Lloydminster	128,218
Fort Chipewyan	181,859
Lac La Biche	105,576
Medley	146,635
St. Paul N.D.B.	3,229
Cooking Lake	63,566
Edson	70,842
Jasper/Hinton	119,908
Grande Cache	106,957
Whitecourt	148,932
Swan Hills	118,668
Slave Lake	131,632
Manning	96,712
Fort Vermilion	11,140
High Level	192,914
Head Office - Miscellaneous	2,363
TOTAL	$ 1,846,515

AIR TRANSPORTATION POLICY

During the 1982/83 fiscal year, expenditures on the headquarters component were $355,067, to cover the planning, programming and administration of aviation activities which come within the terms of reference of Regional Transportation.

Included in this total were grants to the Alberta Aviation Council and its subsidiary the Civil Air Rescue Emergency Service (CARES). The CARES system provides training to aviation personnel in the specialized task of airborne searching and manages the organizational structure to mount searches for missing aircraft, or for other emergency situations.

OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety Section is responsible for the co-ordination and management of the department's programs for occupational health & safety, vehicle/equipment safety, and construction zone safety.

To discharge these responsibilities and achieve uniform and consistent safety standards throughout the department, the section provides functional direction to six regional safety officers who are responsible for co-ordinating a wide variety of safety programs within their regions.

The co-ordination of safety programs for other areas of the department is conducted out of section headquarters. The section is the primary liaison with the Alberta Government's Personnel Administration Office and with Workers' Health, Safety & Compensation.

Twenty-five Joint Work Site Health and Safety committees, comprised of representatives of both employees and management, continued to meet regularly during the reporting period to review accidents, deal with health and safety concerns and make recommendations on corrective action.

The department was actively involved in the Alberta Government's Occupational Health and Safety Program. A senior departmental staff member serves on the joint government/A.U.P.E. Occupational Health & Safety Committee. This committee acts as an advisory body for the government-wide program.

As well, the departmental Occupational Health & Safety Section participates on a continuing basis with the Occupational Health & Safety Section of the Personnel Administration Office, and with other departments, in the areas of program development, government policy, regulation review and program evaluation.

Utilizing the resources of the Employee Health Service of the Personnel Administration Office, the Occupation Health & Safety Section co-ordinated employee participation in the following health screening programs required by the Occupational Health & Safety Act and regulations:

Hearing Conservation Program to assist in the protection of employees from potential hearing loss due to occupational exposure, 1306 audiometric hearing tests were conducted at 117 work sites and 1225 employees attended educational presentations on protection from from hearing loss.

Pulmonary Fibrosis Program to protect employees who are potentially exposed to substances which may cause fibrosis (lessened elasticity) of the lungs, 535 pulmonary (ung) function tests were conducted at 68 work sites, and 649 employees attended educational presentations on prevention of pulmonary fibrosis.

Medical Surveillance Program to protect employees exposed to lead from the potential adverse effects of exposure to lead or lead compounds. One hundred and ten blood tests were taken to determine lead levels at 10 work sites, and 125 employees attended educational presentations on protection from lead exposure.

In addition to legislated health screening programs, the following non-legislated health programs were conducted by the Employee Health Service for department employees:

- Blood pressure screening and counselling ..... 500 people;
- Back care educational program ..... 104 people;
- Vision Conservation Educational Program ..... 140 people;
- Other health education programs, e.g. lifestyle and fitness and emergency care ..... 222 people.

At the request of the department, several hygiene surveys were performed by the Hygiene Unit of the Personnel Administration Office to measure exposure by employees to solvents, welding fumes and dust: Follow-up on results and recommendations assisted the department in arranging for ventilation modifications to the Testing Laboratory and provision of air-conditioned cabs in graders.

During the reporting period, safety training courses and on-the-job safety training continued to play a key role in the department's accident prevention efforts. A summary of these activities is as follows:

SAFETY TRAINING COURSES

- First Aid (Department sponsored Courses) ..... 259 participants
- Crash Response Training for Airport Personnel ..... 12 participants
- Defensive Driving Course, supplemented with Vehicle and Safety Orientation ..... 753 participants
- Professional Driver Improvement Course, supplemented with Vehicle and Safety Orientation ..... 150 participants
- Supervisor's Accident Prevention ..... 91 participants
- Joint Work Site Health and Safety Committee Training ..... on-going

ON-THE-JOB SAFETY TRAINING

- Flagperson Training
- Chainsaw Operation and Maintenance
- Crack Sealing Safety Awareness
- Ferry Operation and Maintenance
- Use of Fire Extinguishers

The section continued to provide advice and assistance to managers, supervisors and employees in many areas in support of their accident prevention efforts. These included:

- Safety education and training
- Occupational Health & Safety legislation
- Personal protective equipment
- Safety inspections/surveys/audits
- Emergency evacuation
- Accident investigation and reporting
- Statistical data
- Environmental hazards
- Occupational Health & Safety committees
- Health education
- Health hazards surveys
- Pre-commencement project meetings
- Traffic accommodation standards and procedures
- Audiometric screening

- Workers' Compensation claims and benefits
- Evaluation of safety equipment and products

During the reporting period the section also co-ordinated the following special projects:

- Departmental Review of the Workers' Health, Safety & Compensation general safety regulations;
- Implementation of the department's safety footwear subsidization policy;
- Construction safety newspaper advertising campaign;
- revised flagperson handbook;

Following is a breakdown on the Workers' Compensation Board claims administered on behalf of the department for the fiscal year ended March 31, 1983:

Medical aid injuries	217
Lost-time injuries	275
Fatalities	2
Hearing Loss	4
Respiratory	2
Personal Appliance (eye glasses)	28
Recurrence	5
TOTAL	533

REGIONAL REPORTS

Region 1 (Southern Region)

A combination of fair summer weather and a mild winter resulted in a successful year in both maintenance and construction for the Southern Region. Total expenditures exceeded $71 million, up slightly from the previous year.

Favourable conditions in the early part of 1983 permitted a winter works gravel stockpiling program to be completed, and enabled an early spring start on the base course projects for Highway 36 and Secondary Road 544. Also, very little time was lost during the winter construction phase of Highway 3 in the Crowsnest Pass, where a major channel diversion of the Crowsnest River was undertaken involving considerable rock blasting.

Continuation of the Economic Stabilization Program provided further incentives to the private sector, as well as additional capital projects to local municipalities. The utilization of engineering consultants to complement existing transportation staff on two major projects also provided assistance to that sector of the industry.

Highlights of the major construction projects in the region were as follows:

- A 14.2 kilometre 4-lane section of the Trans-Canada Highway west of Brooks was completed.
- A major overpass and approach fills were constructed at Kipp adjacent to Highway 3 to accommodate traffic over the C.P.R. marshalling yards which had been relocated from Lethbridge.
- In conjunction with the Department of Environment and local Irrigation Districts, a multi-million dollar program was commenced to construct or rehabilitate a large number of bridge structures over many of this region's irrigation canals.
- Major upgrading of Secondary Roads continued. Two of these major projects were the regrading of S.R. 879 south of Foremost and the surfacing of S.R. 520 from Claresholm to Barons.
- Extensive primary highway overlays were undertaken to protect the investment in the existing paved system.

Region 2 (South Central Region)

1982/83 saw the continuation of a very active construction program on highways, roads and airports in the South Central Region.

The City of Calgary completed construction on the Deerfoot Trail and opened this major continuous corridor to traffic. This project, funded through the department's Urban Transportation Assistance Program, provides a north-south freeway facility for Highway 2 and internal city traffic through the City of Calgary with connecting interchanges linking major city arterial streets.

One of Alberta's first large asphalt pavement recycling projects was undertaken on Highway 2 in the Carstairs-Crossfield area.

A new community airport on the far eastern side of the province, at Empress, was constructed; the Olds/Didsbury community airport was opened; pavement overlay and runway extension at the Drumheller airport was completed; and right-of-way for a future community airport at Beiseker was acquired.

To improve safety on the steep hills in the Drumheller area, two truck inspection pull-outs were constructed: one on Highway 9 south of Drumheller; the other on Highway 56 southeast of Drumheller at the junction of Highways 10 and 56. The first truck arrester bed in Alberta, designed to stop runaway trucks, was constructed and successfully tested.

Right-of-way acquisition was undertaken for more than 20 projects.

The south-central area of Alberta experienced a late fall followed by a mild winter in 1982/83.

As usual, excellent co-operation and assistance from the municipalities, counties and Special Areas in the region was received, and this contributed greatly to the department's accomplishments in 1982.

Other construction highlights in the region included:

Base course, paving or pavement overlays were

carried out on 12 secondary road projects, including Secondary Road 583 in the town of Three Hills and a major base and paving project on Secondary Road 566 from west of Highway 2 at Balzac east to the junction of Highway 9. A further 15 secondary road grading projects were completed.

The Twinning Program on the Trans-Canada Highway continued with two projects in the Strathmore area opened to traffic.

Reconstruction of Highway 27 east of Sundre. Grading, gravelling and overpass construction of the first portion of Highway 901 which will link Highway 2 south of Calgary to Highway 24 was completed, and a major interchange project at the junction of Highway 2 and 22X was started.

Highway construction in the Kananaskis Country recreation area, funded from the Alberta Heritage Savings Trust Fund, continued at an active pace with projects on Secondary Road 968, the Smith-Dorrien/Spray Lakes Trail and the Sheep Road west of Turner Valley being undertaken.

A number of **bridges** were constructed throughout the region. This included the beginning of construction of a bridge over the Red Deer at East Coulee, completion of the Bearberry Creek Bridge on Highway 22 at Sundre, completion of the Highway 27 bridge over the Little Red Deer River west of Olds and completion of the C.P.R. overpass on Highway 901 near Indus and bridges at locations throughout the region.

Region 3 (Central Region)

A large construction program was undertaken in the Central Region during the 1982/83 season. Regional expenditures for construction and maintenance totalled more than $95.7 million. Dry weather was experienced in the early season, followed by heavy rain in late summer and fall, causing the delay of late called projects until 1983/84.

The Economic Stabilization Program funds provided for construction of many kilometres of rural roads. Through the co-operation of counties, municipal districts and Improvement District 10, this program stimulated the local economy by creating additional projects.

The Transportation Winter Works Program provided work for the trucking, crushing and heavy equipment sectors of the construction industry. The major accomplishment during the winter was the stockpiling of 4.8 million tonnes of gravel at the Dickson Dam Site.

Highlights of the major construction projects in the region were:

- Paving on Highway 36 from the junction Highway 53 to the junction of Highway 13 (Killam), 24km;
- Paving Highway 11 from Red Deer to junction Secondary Road 815, 15km;
- Reconstruction and base course of Highway 2A:26 from Wetaskiwin north of the corporate limits to north of junction Highway 13, 2.14km;

Pavement Overlay of:

- Highway 2 north of Bowden to north of Innisfail;
- Highway 13 east of Daysland to Killam;
- Highway 12 east of Norbuck to south of Hoadley;
- Highway 2 from south of Battle River to west of Millet;

There were approximately 78 kilometres of primary highways, secondary and resource roads paved. One hundred and twenty kilometres were completed to the base course stage and 148 kilometres were overlaid under the Pavement Rehabilitation Program. Some 204 kilometres of primary highways, secondary roads, resource roads and access to Indian Reserves and Metis Colonies were graded or regraded. Additionally, 142 kilometres were graded and 485 kilometres were gravelled under the Improvement District programs.

The Red Deer and Killam/Sedgewick airports saw completion of construction of runways to a paved stage. The department also provided financial assistance towards the construction of a new terminal building at the Killam/Segdewick airport.

The reporting year was the last year of the Streets Assistance Program and close liaison continued with municipal councils to ensure completion of the program in the eligible centres by fiscal year end.

Meetings between regional staff, local people and municipal governments were held to address and resolve issues in transportation-related areas.

Region 4 (North East Region)

A large construction program was undertaken by the region with a major emphasis on the Twinning Program. The total expenditure for construction and maintenance was approximately $108 million in the North East Region during the 1982/83 fiscal year.

The following summary indicates the number of projects undertaken the Primary Highway, Secondary Road, Resource Road Improvement and Pavement Rehabilitation programs:

- twenty-two paving projects for approximately 235 kilometres;
- eight base course projects for approximately 221 kilometres;
- thirty-one grading projects for approximately 359 kilometres.

As well, 101 kilometres were graded and 844 kilometres were gravelled with Improvement District funding.

Acquisition of rights-of-way for road construction was undertaken on 22 primary highway projects and on 40 projects in the Improvement District.

Some highlights of construction were:

- Commencement of four-lane construction of Highway 16 from Elk Island Park to east of Secondary Road 834;
- Construction of two new lanes on Highway 16 from junction Highway 36 to west of Innisfree;
- Twinning of Highway 63 through Fort McMurray and construction of the interchange at Hospital Street continued. Uncompleted work was carried over into 1983;

- Commencement of Highway 63 widening from south of Gregoire Road to Fort McMurray;
- Completion of grading at the Elk Point Airport;
- Surfacing of Highway 41 from north of the Battle River to east of Weeks Lake completing a paved link between Wainwright and Vermilion;
- Paving of Secondary Road 663 from west of Caslan to west of Hylo completing to the paved stage the entire route from Boyle to Lac La Biche.

A successful Winter Works Program was undertaken under which were completed three major gravel stockpiling projects, five gravel crushing projects, seven projects involving crushing and haul to stockpile, and approximately 90 kilometres of clearing.

Region 5 (North West Region)

The 1982/83 construction and maintenance programs in the North West Region came close to matching the previous reporting year with an expenditure of approximately $159 million.

The large construction program and keen contractor bidding resulted in an additional work-load for regional staff. Many smaller construction firms and private equipment operators were employed on day-labour secondary road projects. Weather conditions during the summer months were generally satisfactory and construction was completed within available allotments by freeze up.

The winter season was mild with minimal snowfall, resulting in a light demand for winter maintenance. A successful Winter Works Program was completed including two crushing contracts and two large gravel stockpiling projects, as well as two clearing projects on Improvement District local and secondary roads.

In the interests of safety, the Edmonton District continued 24-hour maintenance from November to April to ensure that heavily travelled commuter routes near the city were cleared in a timely manner.

One hundred and eighty kilometres of roads were paved; 222 kilometres of roads were base-coursed; and 295 kilometres were graded. Pavement overlay was applied to 67 kilometres under the Pavement Rehabilitation Program.

Highlights in this region during the reporting period were:

- Completion of grading and paving of Highway 19 forming an important link between Devon and Nisku;
- Completion of the last section of base course surfacing on Highway 32 between Highway 16 and Whitecourt;
- Completion of base course of Highway 2 north of Athabasca which completed this highway to a paved surface from the United States boundary to the British Columbia boundary;
- Construction of the first steel ferry in the province. This is scheduled for launching at the Klondyke Ferry crossing in the spring of 1983;
- Grading, base course and paving on Highway 16X from Edmonton City limits to Secondary Road 779 north of Stony Plain;
- Highway Approach Improvement Program continued with widening approaches and flattening the side slopes at intersections and entrances on Highway 2 and 21.

Region 6 (Peace Region)

Peace Region experienced exceptionally good weather during the 1982/83 fiscal year resulting in substantially increased progress on construction projects, as well as some reduction in winter maintenance costs. Expenditures for construction and maintenance in the region totalled more than $154 million.

There were approximately 149 kilometres of Primary Highways, Secondary and Resource Roads paved; 68 kilometres were completed to the base course stage; and 44 kilometres were overlaid under the Pavement Rehabilitaion Program. Some 813 kilometres of Primary Highways, Secondary Roads, Resource Roads and access to Indian Reserves and Metis Colonies were graded or regraded.

The total road system of the Peace Region was increased by 253 kilometres as a result of new construction. First-course gravel was applied to 488 kilometres of roads, and 3646 kilometres were regravelled.

Ongoing meetings between regional staff and local government councils resulted in transportation matters being dealt with and resolved expeditiously.

Some highlights of the year include:

- Completion of base course on Highway 33 from Highway 2 to south of Adams Creek;
- Commencement of grading on Highway 40 from the Wapiti River south;
- Continuation of grading and base course on the West Peace River Hill;
- Completion of the remaining grading between High Level and Fort Vermilion;
- Completion of base course and paving on S.R. 744 from Girouxville to Jean Cote;
- Completion of base course from La Crete to south of Fort Vermilion and commencement of the section from south of Fort Vermilion to Fort Vermilion.

REGIONAL ADMINISTRATION ELEMENT B1100

1982/83 FISCAL YEAR EXPENDITURE

Region	District	1982/83 Expenditure
1 Regional Office		$ 542,965
1	1	309,515
1	2	391,103
2 Regional Office		805,376
2	3	300,993
2	4	492,096
3 Regional Office		476,470
3	5	311,983
3	6	375,764
4 Regional Office		512,358
4	10	412,121
4	11	472,580
5 Regional Office		672,181
5	7	503,345
5	8	473,376
5	9	417,348
6 Regional Office		550,912
6	12	284,751
6	13	419,928
6	14	439,008
6	15	273,952
HEAD OFFICE - EDMONTON		2,162,993
TOTAL		$11,601,118

Maintenance of Primary Highways and Bridges

Region	District	Primary Highways (Element B5100)
1	1	$ 2,040,846
	2	3,980,503
2	3	3,094,017
	4	7,400,265
3	5	2,876,802
	6	6,037,315
4	10	5,161,954
	11	3,503,192
5	7	3,259,598
	8	3,335,129
	9	3,605,949
6	12	2,877,163
	13	3,231,031
	14	2,435,295
	15	2,357,558
HEAD OFFICE — EDMONTON		913,580
TOTAL		$ 56,110,197

URBAN TRANSPORTATION AND PLANNING DIVISION

L.B.Root,
Assistant Deputy Minister

PLANNING

K.E.Howery,
Executive Director

SYSTEMS PLANNING BRANCH

G. Halls,
Director

OPERATIONAL PLANNING BRANCH

R.J.Sawchuk,
Director

ROADSIDE DEVELOPMENT BRANCH

P.J.W. Roche,
Director

URBAN TRANSPORTATION

M.M.Duncan,
Executive Director

URBAN ASSISTANCE

J. Freeman-Marsh,
Manager

PROGRAM DEVELOPMENT

S.D. Quiring,
Manager

Urban Transportation and Planning Division was previously named the Program Planning Division and operated in that capacity for the first eight months of the reporting period. In January of 1983, the Program Development Branch was transferred to the Regional Transportation Division and the Operational Planning was placed in this Division.

Emphasis has been placed on the urban transportation portion of this division. The funding provided by Alberta Transportation to the province's cities continued to play a significant role in meeting their transportation needs.

Systems Planning Branch continues to review the long-term needs of the provincial transportation network and the Operational Planning Branch refines these needs into functional options. Thus, the division provides the department with longer-term strategies required to maintain and enhance the existing transportation network within the province.

Specific reports on the activities of the Urban Transportation, Systems Planning and Operational Planning branches appear on the following pages.

URBAN TRANSPORTATION BRANCH

During the reporting period, the Urban Transportation Branch was responsible for allocating over $200 million to Alberta's cities under the Urban Transportation Program Package. In 1982/83, this package had nine component programs, designed to provide assistance to cities for capital and operating costs incurred in the development and operation of effective roadway and public transit systems.

A total of 12 cities and the County of Strathcona (Sherwood Park) received urban transportation assistance as summarized in the following table:

Calgary	$ 89,127,577
Camrose	1,311,300
Drumheller	1,507,161
Edmonton	60,431,626
Fort McMurray	2,629,542
Grande Prairie	2,277,640
Lethbridge	22,270,740
Lloydminster	439,435
Medicine Hat	8,829,458
Red Deer	7,921,597
St. Albert	8,496,722
Wetaskiwin	1,778,007
Sherwood Park	778,987
TOTAL	$207,799,792

In addition, special projects of general interest to Alberta's cities totalling $146,864 were funded under Research and Development.

Details of the grants made during the 1982/83 fiscal year for each of the nine programs are outlined in the following sections.

Public Transit Capital Assistance Program

Calgary	$22,675,000
Camrose	85,000
Drumheller	50,000
Edmonton	22,675,000
Fort McMurray	255,000
Grande Prairie	200,000
Lethbridge	520,000
Lloydminster	55,000
Medicine Hat	358,000
Red Deer	382,000
St. Albert	445,000
Wetaskiwin	65,000
Sherwood Park	445,000
TOTAL	$48,210,000

Funds disbursed under this program assist cities in developing cost effective public transit services. In the reporting period, projects approved for funding included design and construction of transit facilities, including LRT, and purchase of transit vehicles and other equipment.

Arterial Roadway Capital Assistance Program

Calgary	$13,368,000
Camrose	1,108,000
Drumheller	373,000
Edmonton	13,368,000
Fort McMurray	1,850,000
Grande Prairie	1,610,000
Lethbridge	3,330,000
Lloydminster	264,400
Medicine Hat	2,200,000
* Red Deer	6,813,000
St. Albert	2,090,000
Wetaskiwin	1,324,600
TOTAL	$47,699,000

*This includes $4,273,000 special assistance to Red Deer for their Gaetz Avenue and 49 Avenue Bridges.

Eligible activities under this program include functional planning, design, construction and land aquisition for major arterial roadways that are extensions of, or support, the primary highway system, and which constitute part of a city's cost-shareable roadway system with the province.

Major Continuous Corridors Program

Calgary (Deerfoot Trail)	$39,200,000
Drumheller (Highway 9)	1,010,000
Edmonton (Yellowhead Trail)	12,200,000
Lethbridge (Crowsnest Trail)	17,500,000
Medicine Hat (Trans. Canada Highway)	5,514,000
St. Albert (Highway 2)	5,442,545
Wetaskiwin (Highway 2A)	260,455
TOTAL	$81,127,000

This program promotes the development of one high-standard major continuous roadway through a city. For a roadway project to be eligible, the route must be (in order of priority): the urban portion of a primary provincial highway; or a route which connects primary provincial highways; or a part of a city's connection to primary provincial highways.

Railway/Highway Grade Separation Structure Assistance Program

Calgary	$ 4,125,245
Edmonton	3,374,755
TOTAL	$ 7,500,000

Funds provided under this program assist in the design and construction of railway/highway separation structures that promote efficient traffic operations and improved safety.

Transportation Systems Management Program

Calgary	$ 1,349,000
Camrose	37,000
Drumheller	20,000
Edmonton	1,349,000
Fort McMurray	94,000
Grande Prairie	66,000
Lethbridge	172,000
Lloydminster	25,000
Medicine Hat	114,000
Red Deer	127,000
St. Albert	97,000
Wetaskiwin	29,000
TOTAL	$ 3,479,000

This program promotes and financially assists in spot improvements that aid in the impiementation of effective and safe transportation systems.

Urban Signing Program

Calgary	$ 869,000
Camrose	12,900
Drumheller	11,830
Edmonton	679,440
Fort McMurray	93,600
Grande Prairie	73,600
Lethbridge	41,600
Lloydminster	27,200
Medicine Hat	96,180
Red Deer	38,800
St. Albert	30,000
Wetaskiwin	25,850
TOTAL	$ 2,000,000

This project is designed to establish uniformity and systematization of guide signing and clarity of routing in urban areas.

Research and Development Program

Calgary	$ 481,172
Camrose	486
Drumheller	171
Edmonton	180,441
Fort McMurray	29,222
Grande Prairie	26,960
Lethbridge	5,800
Lloydminster	1,777
Medicine Hat	31,238
Red Deer	9,247
St. Albert	44,077
Wetaskiwin	0
Sherwood Park	41,767
SUB-TOTAL	$ 852,358
Multi-jurisdictional Projects	146,864
TOTAL	$ 999,222

Funds provided under this program assist in conducting research activites aimed at providing more efficient urban transportation. Major projects funded in the reporting period include:

for Calgary — CALTS Model Update completion, Road Needs Study completion, South LRT Impact Study and the Sarcee Trail Planning Study;

for Edmonton — Transit Service Review, TSM Legislation Study, Sulphur Asphalt Research Project and the Computer Aided Telephone Transit Information Systems Feasibility Study;

for Other Cities and the County of Strathcona — the completion of transportation study updates for Grande Prairie, Medicine Hat, St. Albert and Fort McMurray, as well as the Hazardous Materials Inventory and Transportation Project for Red Deer; the road needs study completion and the transit system economic viability study for Strathcona.

Multi-jurisdictional projects included the provision of transportation needs for the handicapped in Alberta cities; slotted left-turn bays at signalized intersections; and the Alberta Transportation/Alberta Education student transportation grant.

A structure review was completed for the Urban Transportation Study Manual for small and medium-sized cities.

In addition to the above, a major component funded for all cities under the Research and Development Program is the sponsorship of transit/roadway personnel in specialized technical or administrative programs.

Grants-In-Lieu of Public Transit Operating Assistance

Calgary	$ 5,918,570
Camrose	24,714
Drumheller	12,760
Edmonton	5,299,240
Fort McMurray	307,720
Grande Prairie	241,680
Lethbridge	546,240
Lloydminster	18,058
Medicine Hat	399,340
Red Deer	454,050
St. Albert	311,800
Wetaskiwin	19,102
Sherwood Park	292,220
TOTAL	$13,845,494

This program provides unconditional grants towards reducing or eliminating public transit operating costs, including contributions to transit services for disabled and senior citizens. The grants during the reporting period were based on $10 per capita to urban areas with approved public transit services, and $2 per capita to cities without approved public transit services.

Primary Highways Maintenance

Calgary	$ 1,141,590

Camrose	43,200
Drumheller	29,400
Edmonton	1,305,750
Grande Prairie	59,400
Lethbridge	155,100
Lloydminster	48,000
Medicine Hat	116,700
Red Deer	97,500
St. Albert	36,300
Wetaskiwin	54,000
TOTAL	$ 3,086,940

These unconditional grants are provided to assist the maintenance of primary provincial highway routes within the cities. During the reporting period the provincial contribution was $3,000 per lane-mile of eligible roadway.

OPERATIONAL PLANNING BRANCH

Operational Planning Branch was placed in the Urban Transportaton Planning Division on February 1, 1983. Financial administration for Roadside Development Branch is combined with that of Operational Planning Branch for this fiscal year.

Operational Planning Branch is responsible for providing support services to the department in four section areas:

- Design and Environmental Services,
- Location Study Services
- Photogrammetric Services, and
- Technical Services

The branch provides engineering services primarily to the department's Engineering and Regional Transportation divisions. These services form the basis for more detailed design and the determination of right-of-way requirements.

Interaction with other branches and divisions of the department, with other government departments, planning agencies and the general public is an essential part of the branch's activities in reaching agreements on the important standards and specific design features of a project.

Under the following headings are summaries of specific projects, quantities of work completed and a financial report highlighting the year's activity.

DESIGN AND ENVIRONMENTAL SERVICES

This section provides pre-construction design for roadways, intersections and interchanges, prepares access control plans and provides input into processing of area structure plans and other planning documents.

During this reporting period, work was completed on 60 access control, intersection improvement, landscaping and miscellaneous projects. Eight economic and environmental analyses and reviews were completed. Thirty-nine projects are under development. Preliminary designs and design revisions were completed for 41 interchange sites and an additional 16 are under study for a new or revised design.

Highlights include the following:

- Completed preliminary plans expanding 78 kilometres of existing two-lane primary highway to multi-lane divided expressway standard. Work is being advanced on preliminary plans for an additional 180 kilometres of multi-laning projects for existing two-lane highways.
- Preliminary designs prepared for an interchange at the intersection of Highway 16 and 47, Highway 2 and Acme Road, and for expansion of the existing interchange at the junction of Highway 2 and S.R. 542 at Morinville.
- Continued on-going liaison work for the detailed design phase for the major interchanges at the intersections of Highway 2 and 22X, and Trans Canada Highway and Stoney Trail.
- Continued on-going liaison work related to the rationalization of the Transportation and Utility Corridor and the integration of adjacent land use and utility requirements with the roadway design for the Calgary and Edmonton Parkway Rings.
- Completed detailed landscape plans for approximately 61 kilometres of roadway within the Kananaskis Country area.
- Reviewed and integrated three major regional waterlines, one pipeline and one transmission line proposal without existing and future highway plans.

LOCATION STUDY SERVICES

Studies were undertaken to analyze new highways, secondary and local roads, and bridge locations. Field surveys were conducted on some projects to give advance design data. Control surveys were also undertaken to assist photogrammetric map production.

Studies were completed on 47 projects and another 91 projects were underway at the end of the reporting period. A few of the major study projects completed during the year were:

- Highway 12 East of Bentley to West of Rimbey;
- Highway 16 Medicine Lodge to Marlboro;
- Highway 16 West of Innisfree to East of Manville;
- Highway 23 Junction Highway 3 to Champion;
- Highway 45 Junction Highway 41 to Saskatchewan border;
- Highway 66 Junction Powderface Trail to west of Elbow Falls;
- S.R. 541 Forest Reserve Boundary to Longview.

Work was continued on several major projects

including Highway 40 from Grande Cache to Grande Prairie, the Stoney Trail extension from Highway 1 to Highway 8 and the Deerfoot Trail extension at Calgary.

Location surveys were completed on 17 projects totalling 170 kilometres of survey.

PHOTOGRAMMETRIC SERVICES

Aerial photography is used in producing general and detailed mapping and mosaics. Precise control surveys are carried out to assist in mapping and for establishing accurate positions and data for route segments.

During the reporting period 33 430 contact prints of aerial photography were obtained from Alberta Energy and Natural Resources for use in various studies and reports. Approximately 4853 kilometres of new aerial photography was contracted during the period which aided in obtaining or preparing the following:

- Orthomosaics 2486 kilometres
- Mosaics in format 6480 kilometres
- Miscellaneous mosaics 5244 kilometres

Photo control surveys were completed on 20 projects for a total of 336 kilometres. Mapping was completed on 138,300 acres. Of this, 75,180 acres were scribed and 135,800 acres were digitized for computer generation of design quantities.

TECHNICAL SERVICES

This group is responsible for preparing detailed design plans and drafting as required for Location Study Reports and Functional Design Studies. Mosaic profile sheets and strip mosaic sheets are prepared for use throughout the department in construction and for inventory purposes.

SYSTEMS PLANNING BRANCH

Systems Planning Branch carries out comprehensive planning and provides analytical services to the department's divisions. These responsibilities include forecasting future transportation needs based on expected social and economic development, and assessing alternative means of meeting these needs.

By monitoring traffic volume and travel characteristics on various parts of the provincial highway system, the branch was able to identify a major diversion from the trends of several past years. The decline in traffic which became evident in the latter part of last year continued throughout 1982. In the first few months of 1983, the decline slowed and traffic volumes showed signs of stabilizing.

These changed conditions made it necessary to obtain new data and resulted in more effort being devoted to providing accurate information and analysis, which can be used in design and programming decisions.

The program of providing technical and financial assistance to communities in developing transportation plans via studies continued. These studies are used in the transportation sections of a number of regional and general municipal plans, and offer information to municipal councillors on the transportation implications of land use expansion.

In the 1982/83 fiscal year, studies were completed in Edson, Sturgeon, High River, Ponoka, Lac La Biche, Sylvan Lake, Hinton, Grimshaw and Athabasca.

Assistance in planning was also rendered through direct liaison of branch staff with regional and other planning agencies. An information guide was developed which identifies transportation problems commonly being experienced in the smaller urban communities, and lists ways in which these problems have been solved.

Drawing on this experience of others is helpful in making day-to-day decisions and eliminates the duplication of effort where each area is studying the same subject.

ROADSIDE DEVELOPMENT BRANCH

Roadside Development Branch provides an accurate and timely service to planning consultants, utility companies and the public, under the terms of the Public Highways Development Act and the Planning Act. This service involves processing applications for development and for utilities, and handling referrals for subdivision applications for future highway planning.

Procedures were established to provide Certificates of Access as required by Section 86 of the Planning Act. Numerous certificates were issued under this legislation.

Roadside Development provides planning expertise and information to other branches within the department and to external government agencies.

The following is a list of permit and review activities:

Developments and Subdivisions

• Development permits	378
• Subdivision reviews	651
• Annexation reviews	34

Utilities

• Alberta Governement Telephone lines	241
• Oil and gas pipelines	209
• Power lines	275
• Sewer and water lines	50
• Oil and gas well sites	15
• Television cables	7

FINANCIAL REPORT

EXPENDITURES FOR THE YEAR END MARCH 31, 1983

OPERATIONAL PLANNING ADMINISTRATION		
Administrative Services	$ 232,818	
General Office Services	107,447	$ 340,265
ROADSIDE DEVELOPMENT		
Administration	192,972	
Development Permits	44,899	
Utility Permits	32,749	
Subdivision Permits	33,079	
Pipeline Permits	22,830	$ 326,529
PRE-CONSTRUCTION ENGINEERING		
Administration	68,934	
Functional Design	352,076	
Drafting Services	430,134	$ 851,144
LOCATION SERVICES		
Administration	487,518	
Location Studies	279,517	
Photogrammetry Mapping	159,393	
Photogrammetry Airphoto Services	335,951	
Reconnaissance, Location and Control Surveys	774,048	$ 2,036,427
PROGRAM ELEMENT B1200	$ 3,554,365	

ALBERTA MOTOR TRANSPORT BOARD

H.H. Hendrickson,
Chairman

MOTOR TRANSPORT BRANCH

H.K. Walker,
Director

OPERATING AUTHORITIES BRANCH

G.I. Bellingham,
Director

ADMINISTRATION, RESEARCH & CERTIFICATE REVIEW BRANCH

A.C. Smythe,
Director

Alberta Motor Transport Board is a body corporate, as constitued under the Alberta Motor Transport Act. As an autonomous quasi-judicial tribunal, the Board deals with intra and extra provincial motor carrier and bus matters. The Board has delegated authority from the federal government by virtue of the Motor Vehicle Transport Act (Canada).

The Board currently consists of the following members:

H.H. Hendrickson, B.A.Sc., P.Eng. — Member and Chairman
G.I. Bellingham, CITT — Member, Vice-Chairman, and Director of Operating Authorities Branch
H.K. Walker, M. Eng., P.Eng. — Member, Vice-Chairman, and Director of Motor Transport Branch
A.C. Smythe — Member and Director of Administration Research and Certificate Review Branch
R.N. McGregor — Member
L. Hollinger — Member
J. Rempel — Member
J.R. Soulsby — Member
R.E. Bothwell — Member

BOARD INITIATIVES

During the 1982/83 fiscal year, the Board met eight times on policy-related items and formulated several directives as follows:

- As a means of easing regulations across jurisdictions, the Board developed and adopted a definition and list of items that would normally

constitute the commodities allowed to be transported by a household goods mover. The definition and list are now being presented and considered for Canada-wide adoption.

- In its efforts to stimulate backhaul fuel economy, the Board developed and adopted an expansion of its list of commodities exempted from the normal public hearing process. This concept and list of commodities is now being negotiated with other Canadian jurisdictions.

The Board, in its attempt to economize on the time and effort of the Board and industry, initiated a list of commodities that would be exempt from operating authority requirements.

In its overall attempt to streamline operations, the Board initiated a number of procedural changes including:

- issuance of certificates for a three year period as opposed to one;
- consolidation of forms employed for permit issuance;
- revision of the fee structure for overload and licence permits;
- initiation and simplification of commodity descriptions for operating authority issuance;
- simplification of the requirements to file complementary authority documentation for certificate review and operating authority renewals.

ACTIVITIES OF THE BOARD

The members of the Board hold regular informal hearings and formal public hearings as required, to consider motor carrier and bus applications for operating authority.

During the 1982/83 fiscal year, the Board held 49 regular informal hearings and 18 formal public hearings, one of which was a joint hearing with the Saskatchewan Highway Traffic Board.

In addition, the Board held 27 Show Cause hearings and 41 special meetings. Of the 41 special meetings, eight were for special applications for consideration under a general consolidation of operating authority policy, during which 43 applications were heard.

Board members worked within the Canadian Conference of Motor Vehicle Administrators (CCMVA) and Roads and Transportation Association of Canada (RTAC) in a continuing effort to bring about national uniformity in regulations and policies for carriers transporting goods and people.

In addition, the Alberta Board played a pivotal role, in conjunction with the federal government, in having the moratorium against Canadian carriers lifted. In this regard, the Board is now represented as a part of the U.S.A./Canada consultative mechanism that was established to further ease tensions between transport authorities.

MOTOR TRANSPORT BRANCH

Motor Transport Branch has been delegated authority to provide specific programs related to highway weight and dimension by virtue of Section 35(1)n-q of the Motor Transport Act.

To achieve its goal of maximal use of the highway system while ensuring highway plant protection and safety considerations, the Motor Transport Branch is divided into two sections: Transport Field Operations and Transport Engineering.

During the year, the branch collected in excess of $3 million in permit fees.

TRANSPORT FIELD OPERATIONS SECTION

Transport Field Operations (T.F.O.) Section has nine regional offices and 19 Vehicle Inspection Stations (V.I.S.) located throughout the province. In the course of their duties, T.F.O. officers perform inspections and issue permits. During the reporting period, 539 investigations were conducted on carriers.

To ensure consistency in the application of regulations by all T.F.O. officers, four upgrading in-house training courses were held in Red Deer.

During the reporting period, new Vehicle Inspection Stations at Burmis, Vermilion and Grimshaw were constructed.

TRANSPORT ENGINEERING SECTION

Transport Engineering Section is responsible for developing regulations, policy and general procedures for the trucking industry in order to maximize highway use while maintaining safety standards.

During the reporting period, the section initiated 33 road-ban orders to protect weakened roadbeds and authorized permits for 4433 overloads and 10 517 over-dimension loads.

This section, in conjunction with the Roads and Transportation Association of Canada (RTAC), participated in the development of a major equipment research project designed to aid in the acceptance of oversize transport equipment standards across Canada.

The section also participated with the Canadian Conference of Motor Transport Administrators (CCMTA) in the development of a common dimensional warning sign. The "D" sign that was eventually accepted has since been incorporated, on a transitional basis, into Alberta regulation.

During the reporting period, the section commenced a bridge evaluation program that is designed to provide an "overload capacity" rating on all major bridges in Alberta. Upon completion, this program will provide a readily accessible computer based output on bridge capacities for overload requests.

MOTOR TRANSPORT BRANCH

Schedule MTB1

Year end March 31, 1983

Location	Vehicles Weighed	Vehicles Checked	Infractions	Fee Permits	Non-Fee Permits	Hours Open	$ Total Fees
ACHESON	88202	7603	555	10207	2197	5760	$ 437,016
ARDROSSAN	34087	3525	150	1042	437	2715	28,467
BALZAC	156640	22878	1110	7462	1727	7161	286,213
CALGARY (0)	—	—	—	2487	2175	2017	33,413
COUTTS	37940	29948	820	4512	2535	6859	192,320
DUNMORE	51967	10585	296	6982	2110	6830	175,581
EDMONTON (0)	—	—	—	11656	3123	2288	527,166
FT. MACLEOD	—	3478	54	1707	839	4353	51,241
GRANDE PRAIRIE(0)	—	—	—	470	590		10,845
GRANDE PRAIRIE (S)	33047	2596	143	5623	1655		201,418
GRIMSHAW	10523	1146	435	3847	1837	2825	145,072
HINTON	15148	2524	9	2542	639	3388	77,634
JUMPING POUND	58908	16238	352	3339	527	5502	82,511
ST. PAUL (0)	—	—	—	1574	755		43,405
LEDUC	84138	5084	1497	5897	1924	5750	283,458
LETHBRIDGE (0)	—	—	—	1579	1223		23,736
MORRIN	11719	2625	77	1194	313	1659	30,668
RED DEER	4361	—	17	6375	723	2454	155,457
RADWAY	22084	3422	829	2180	514	3529	85,131
ST. ALBERT	29361	2975	86	1379	519	3467	36,007
STRATHMORE	31857	3215	128	1165	145	2011	40,703
VERMILION	20086	2391	55	4604	1604	6320	115,371
WHITECOURT	50082	3453	683	2668	914	4261	91,999
TOTAL	739,880	123,686	7,296	90,491	29,025	78,879	$ 3,154,832

OPERATING AUTHORITY BRANCH

Operating Authority Branch is responsible for the prorationing of licence fees, insurance documentation, intra provincial operating authorities and documentation relating to extra provincial truck and bus operating authority applications appearing before the Alberta Motor Transport Board for adjudication.

Through the Motor Transport Branch, the province negotiates and maintains reciprocal licencing arrangements for commercial motor vehicles on an interprovincial and international basis. Alberta now participates in three commercial vehicle licencing reciprocity agreements in Canada and the United States. The three plans and their respective memberships are:

International Registration Plan (IRP), whose members, in addition to Alberta, include 26 U.S. states. The bilateral agreement between Alberta and the Commonwealth of Pennsylvania, which encompassed all the provisions of the International Registration Plan, continued throughout 1982/83 fiscal year.

Uniform Vehicle Registration Pro-ration and Reciprocity Agreement (Western Compact), whose members include 20 U.S. states, plus British Columbia and Alberta. The two provinces, plus five U.S. states, are members of the Uniform Agreement only.

Canadian Agreement on Vehicle Registration (CAVR), whose members include all Canadian provinces. Prince Edward Island implemented pro-rationing of licence fees during the 1982/83 fiscal year.

Schedule MTB2

COMMERCIAL LICENCING RECIPROCITY

	#	Revenue
Vehicles pro-rated	29,369	$ 1,504,613*
Cab cards issued	13,853	
Backing plates	1,832	$ 5,496

*This figure includes licence fees from non-resident carriers only. Licence fees from Alberta residents are paid directly to Motor Vehicles Division, Alberta Solicitor General. Pro-rationed licence fees from Alberta residents for the 1982/83 fiscal year totalled $1,556,593.

The reduction in fees collected reflects the half-fee schedule implemented by Alberta Solictor General.

PERMITS ISSUED, REVENUES RECEIVED

Type of Permit	Issued/ Approved #	Revenue
Liveryman's Licences	321	$ 3,210
Drive-Yourself Certificates	346	$ 3,460
Non-Resident Reciprocity Permits	600	Nil fee
Section 20 Permits (Special Purpose)	977	Nil fee
Triple-Trailer Permits	21	Nil fee
MTB 18 (Bus) Private Bus Permits	937	Nil fee
MTB 19 (Bus) Special or Single-Trip Permits	185	Nil fee
MTB 82 (School Bus) Single-Trip Permits	414	Nil fee
MTB 85 (Bus) Equipment Exemption Permits	393	Nil fee

Schedule MTB3

OPERATING AUTHORITY CERTIFICATES

1982/1983

INTRA PROVINCIAL OPERATING AUTHORITY

Truck		Bus	
New Applications	2,665	Class A Charter Service	28
Amendments	379	Class B Charter Service	34

Transfers	116	Class C Charter Service	47
Cancellations	670	Intra Provincial Public	
Reinstatements	12	Bus Route Certificates	149
Renewals	5,751		

Also, 26 increases in public bus tariffs were approved, one was declined, and two tabled, and seven changes in scheduled were approved.

EXTRA PROVINCIAL OPERATING AUTHORITY

	Approved	Deferred	Declined	Tabled	Withdrawn	Cancelled
New Applications						
Motor Carrier	228	50	15	—	—	—
Bus	12	1	2	4	—	—
Amendments						
Motor Carrier	466	106	23	11	—	—
Bus	3	—	1	1	—	—
Transfers						
Motor Carrier	90	1	—	3	—	—
Bus	2	—	1	—	—	—
Cancellations						
Motor Carrier	169	—	—	—	—	—
Bus	—	—	—	—	—	—
Temporary Authorites						
Motor Carrier	493	—	24	4	—	—
Bus	23	—	1	—	—	—
Reinstatements						
Bus	3	—	—	—	—	—
Private Carriage						
Identification Cards	203	—	—	—	—	—

ADMINISTRATION, RESEARCH & CERTIFICATE REVIEW

Administration, Research and Certificate Review Branch is responsible for providing both the Motor Transport Board and the Motor Transport Branch with the following services:

Administration and Financial:

- budget preparation and analysis;
- revenue and expenditure, controls, procedures and analysis;
- procurement;
- general office administration;

In the 1982/83 fiscal year, a new revenue reporting system was designed and implemented. The system improved financial control and streamlined the operational system for the reporting of revenues from all sources. In addition, the new system provides a more accurate and concise format for reporting all revenues to Treasury on a monthly basis.

Records Management:

In continuing the development of the Central Records Management Program, the reporting period saw the incorporation of some 24 000 motor carrier files into the system. Work began on the consolidation of the subject files.

Certificate Review:

The task of conducting a systematic review of the terminology contained in all Extra Provincial Operating Authorities continued, and some 217 reviews were completed. Work also commenced on a major review of the existing Commodity Index, with the intent to consolidate and, where possible, simplify the definitions and terminology.

Research:

Research Section is largely responsible for carrying out long-term projects and policy planning as directed by the Board. A number of major projects and programs were completed, the most significant being a redesign and consolidation of both fee and non-fee permits, and a revised permit fee structure.

In addition, an analysis of the Board's computer system needs was concluded and incorporated into the department's five-year plan.

TRANSPORTATION SAFETY BRANCH

R.R. Hogg,
Director

Transportation Safety Branch is responsible for co-ordination of the Provincial Government's traffic safety goal of reducing motor vehicle incidents in Alberta.

During 1982/83, 99 654 traffic collisions were reported (down from 119 891 during 1981/82), in which 21 691 people were injured (down from 25 121 in 1981/82), and 502 were killed (700 in 1981/82).

These figures gave Alberta the sixth highest provincial casualty rate in Canada during 1982/83. Approximately 85 per cent (84 629) of the traffic collisions involved property damage only.

PLANNING AND PROGRAM SUPPORT SECTION

During the reporting period, Planning and Program Support Section was responsible for not only monitoring and analyzing the causal factors of traffic collisions, but also for evaluating the effectiveness of countermeasures.

In addition to being involved in all aspects of the identification, development, planning, monitoring and evaluation of traffic programs, the research unit answered approximately 175 information/statistical requests. These requests, which covered a wide range of traffic-safety-related topics, came primarily from the general public, the media, and other government departments. The requests took approximately 1000 man hours to complete and totalled approximately $18,000 in data processing costs.

As a continuation of the five-year Highway Safety Management Program, the section continued its on-going research into priority problem areas (e.g. impaired drivers), and prepared a number of comprehensive reports and background documents on these subjects.

The province's traffic data system is maintained by Planning and Program Support Section. Data from all reportable motor vehicle collisions (approximately 100 000 in 1982/83) were collected, processed and analyzed. This information was used by the branch to identify highway safety problems and to plan countermeasure programs.

In order to make the system more responsive to the user/contributor groups, a new collision report form was designed during 1982/83 and will be implemented by the province's enforcement agencies in 1983/84.

The Field Services Unit surveyed 398 intersections for vehicular movements and pedestrian interactions. Particular manoeuvers such as special incidents, queue lengths and specific

actions were observed. In addition, 30 railroad crossings were also surveyed.

1982/83 also saw a marked increase in the number of speed study locations. Sixty sites were added to the previous inventory so that 642 studies in total were completed. Three hundred and forty-six special locations were also studied at the request of the traffic engineers.

As a special project to assist the highways safety technologists, a rumble strip study program (36 sites) was undertaken. The unit also filmed or video-taped 52 locations (e.g. railroad crossings and intersections).

OPERATOR IMPROVEMENT SECTION

The Operator Improvement Section attempts to reduce the number of traffic-related mishaps through its public education program. It also performs a number of administrative functions within the branch.

During the 1982/83 fiscal year, members of the Operator Improvement Section made 1590 presentations at 913 schools in Alberta. These presentations involved 110 910 students.

To supplement this activity, 514 traffic-safety presentations were given to non-school groups such as members of industry, service groups and medical associations. A large number of Albertans received safety related information in this manner.

While much of the section's public education program involves providing lectures, representatives are also available to man displays in schools, industrial settings, malls and fairs. Much of the Transportation Safety Branch's literature that is made available to the public is provided by the Operator Improvement Section.

Safety education representatives held 33 orientation courses (defensive driving and professional driver improvement courses) for Alberta Transportation employees. School bus driver improvement-course manager orientations were given to 50 of the province's school bus supervisors.

In the Edmonton area, driver counsellors have continued to provide assistance on a more personal level to 262 drivers who were involved in two or more collisions in the previous year. Interviews with these drivers have proved to be of assistance to them and have enabled the branch to acquire more detail about these cases.

Counsellors were also involved in in-house lectures which outlined their program and explained their findings.

The Operator Improvement Section is responsible for testing driving instructors as well as licencing and monitoring instructors and driving schools. A total of 865 driving instructors and 93 driver-training schools were licenced by the branch during the period. Safety education representatives were involved in 302 monitoring events within the driver training industry.

In conjunction with its involvement in driving schools, the section administers the Driver Education Incentive Program. During the year, 18 669 new drivers each received certificates entitling them to an insurance reduction.

Because of the Transportation Safety Branch's close relationship with both the driver-training and student transportation industries, special seminars were given for managers and operators in each section. In the 1982/83 fiscal year, 68 school bus supervisors and 48 driving-school operators attended these seminars.

ENGINEERING SECTION

The transportation safety aspects of vehicles and roads are the responsibility of the Engineering Section.

During 1982, the section's vehicle systems staff inspected 6792 commercial vehicles at roadside locations, Vehicle Inspection Stations, and company terminals. In addition, the unit is also responsible for monitoring the inspection stations and mechanics licenced to inspect buses.

During the year, 2647 visits were made to 735 licenced inspection stations and 1487 inspection mechanics in the province. 4556 school buses and commercial buses were monitored for compliance with the provincial bus regulations.

As part of the continuing Crash Investigation Program, motor vehicle examiners inspected 96 collision-involved vehicles to establish the mechanical condition of the vehicles before the crash.

In-depth, investigative studies were completed on fifty fatal crashes and 333 school bus crashes.

One of the ongoing countermeasures, is the identification and treatment of roadways and roadway fixtures. Under this program, 160 locations were reviewed for possible defect repair, and 216 construction zone collisions and 236 fatal collision locations were reviewed for roadway improvement.

Additionally over 2000 locations, where many collisions had occurred or where there were signs of a buildup, were reviewed for roadway modifications. From all these reviews 170 highway locations were the target of efforts to prevent further collisions through modifications. One hundred sites were field inspected to compliment the analysis of these locations.

This program also provides traffic engineering consultation within the department in regard to road planning, design construction and maintenance. Included in this is a Highway Improvement Priority List based upon collision experience.

The section completed an annual review of highway speed limits throughout the province. As a result speed limit changes were implemented on 36 highway sections.

Ten new traffic control signals and eight pedestrian signals were installed on primary highways. Special features in the signalization program included installation of energy absorbing crash cushions near St. Albert, a high-load warning system on Highway 2 and moveable traffic signal poles on Highway 15.

The sections role in co-ordinating railway crossing improvements continued. Applications were made to the Canadian Transport Commission for installation of automatic protection signals at 54 crossings and other improvements were proposed for a further 41 crossings.

Alberta
TRANSPORTATION